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The OIL WEEKLY

INTERNATIONAL OIL AUTHORITY

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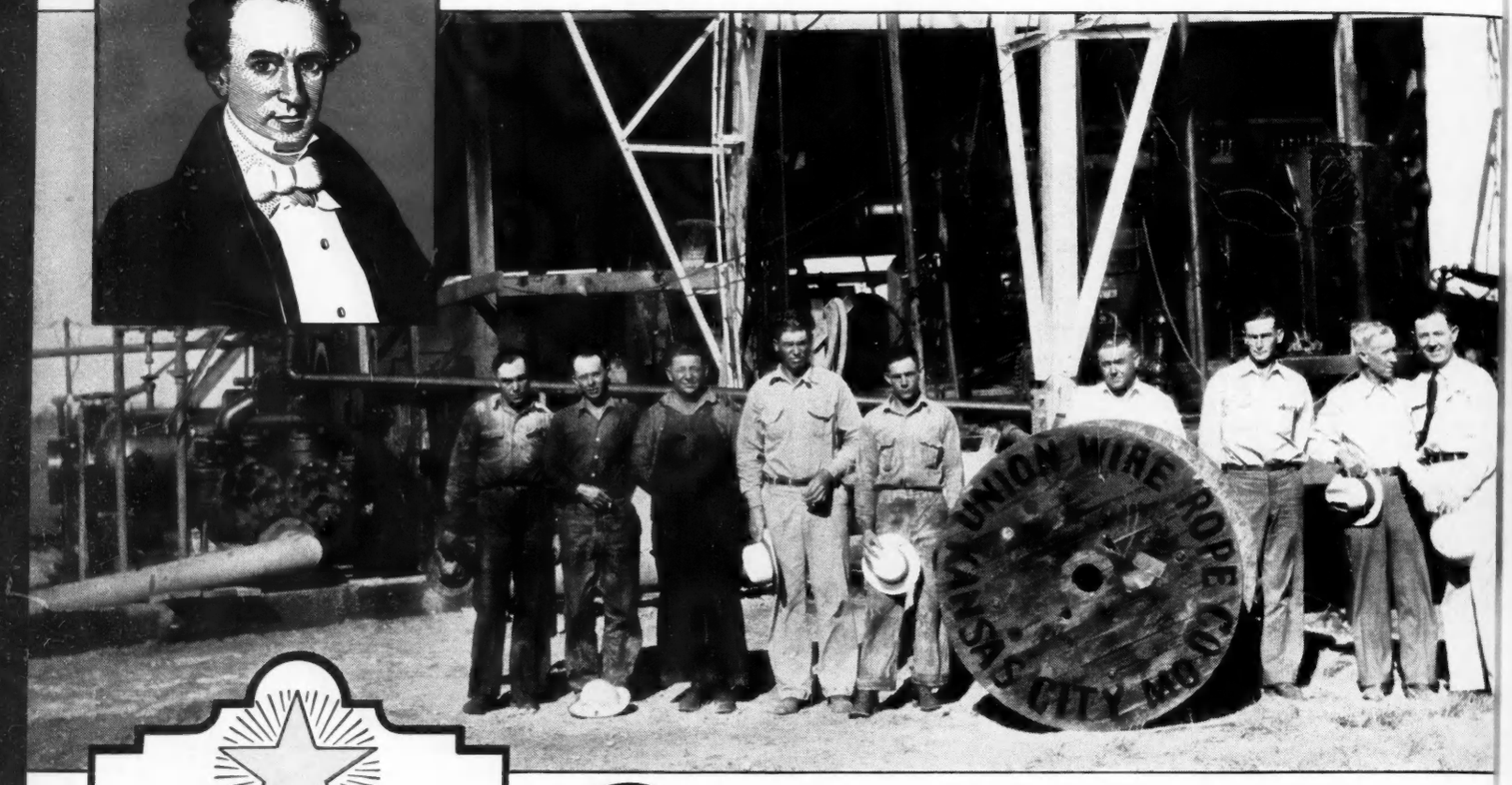
MARCH 15, 1937 NUMBER

Service MEANT EVERYTHING to this GREAT TEXAN . . .



HOW AUSTIN SERVED TEXAS

It is said that Texas would never have been settled by Americans had it not been for Stephen F. Austin. Using peaceful and lawful methods of colonization, he succeeded where all previous forceful methods had failed. Austin's valuable services to the early Texans included, distributing the land; promoting friendly relations with the Mexican government; mapping the territory and charting its rivers; gaining the good will of the Indians; establishing commerce with the United States; encouraging the erection of gins and sawmills; establishing schools.

Austin selected the site of the capital city of Texas which today bears his name. Shortly before his death Austin wrote . . . "Texas has been the object of my labors, the idol of my existence. It has assumed the character of a religion, for the guidance of my thoughts and actions, for fifteen years."

Service Means Everything in Products Too

Stephen F. Austin had only one ambition in life—to serve Texas. He became the founder of that great state by establishing its first legal American settlement in 1822. Thereafter, Austin spent all of his efforts in colonizing Texas and safeguarding the interests of its early settlers.

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The photograph shows Alma Oil Company's "Kloh No. 2" in Ector County, Texas—drilled by Richmond Drilling Company of Big Spring, Texas. The men, left to right, are: Frank Smith, floor hand; J. M. King, derrick man; F. E. Eppler, engine man; Herbert Miller, farm boss, Alma Oil Co.; O. K. Hostetter, driller; Percy Bosworth, contractor, Richmond Drilling Co.; Orville Brasuel, visitor; Harry Reigle, contractor, Richmond Drilling Co.; H. R. Cutlip, Union Wire Rope Corp.

See UNION Section, 1937 Composite Catalog

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The Oil Man's Calendar

MAR. 17	Annual Oil Jubilee, Wewoka, Oklahoma.
17–19	American Association of Petroleum Geologists, Los Angeles.
APR. 8–10	Petroleum Industry Electrical Association, Shreveport, Louisiana.
13	American Petroleum Institute, Division of Production, Pacific Coast District, Los Angeles.
15–16	National Petroleum Association, Cleveland, Ohio.
26–28	Western Petroleum Refiners Association, Hot Springs, Arkansas.
MAY 6–7	American Petroleum Institute, Division of Production, Eastern District, Columbus, Ohio.
10–16	American Gas Association, Natural Gas Department, Kansas City, Missouri.
19–21	Natural Gasoline Association of America, Tulsa.
23–27	National Association of Purchasing Agents, (Oil Company Buyers Group), Pittsburgh, Pa.
JUNE 1–3	American Petroleum Institute, Mid-Year Meeting, Colorado Springs, Colorado.
11	Interstate Oil Compact Commission, Santa Fe, New Mexico.
14–19	Second World Congress of Petroleum, Paris, France.
17–19	Pennsylvania Grade Crude Oil, Association, Sailing from Buffalo, New York.
25–27	National Oil Scouts Association, Dallas, Texas.

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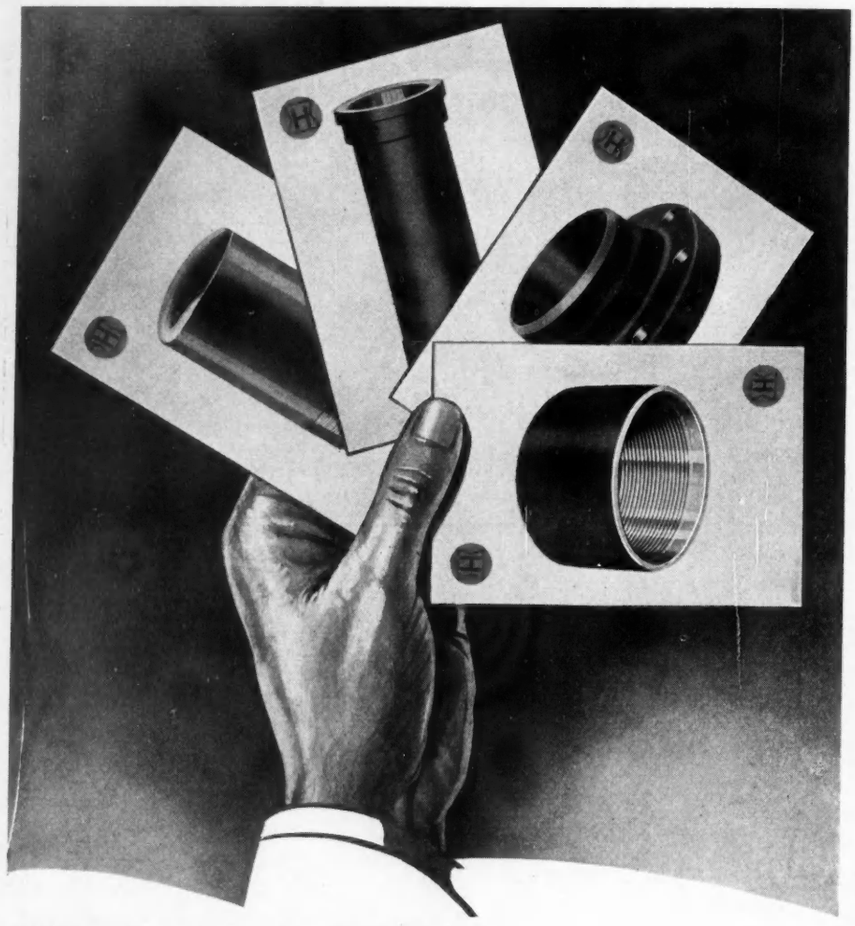

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LOOKING AHEAD

WITH THE EDITOR

Geologists to meet . . . When to abandon wells . . . East Texas pressure again important.

NEXT week is "geological week." The largest annual convention of geologists, geophysicists and paleontologists will take place at Los Angeles under the auspices of the American Association of Petroleum Geologists and affiliated societies. Over 60 papers will be presented, the majority on technical subjects. A symposium on recent developments is to be held at which papers covering all the important districts of the United States and a number of foreign countries will be presented. The next OIL WEEKLY will bring to its readers the first complete coverage of this important meeting published in any oil journal.

WHEN should a stripper well be abandoned? Several California operators are attempting to determine the status of weak wells in several fields, with the view of abandoning producers that fall in the non-profitable column. Next week an article will describe methods employed by various operators in their search for wells that should be eliminated. It will prove helpful.

A PROBLEM of great importance to the petroleum industry has arisen in the East Texas field. Recent drops in bottom-hole pressure will continue unless steps are taken to arrest them, which would mean an increase in pumping operations and a probable loss in ultimate recovery. What should be done? Should the top allowable be reduced while other fields are getting increases? Such a reduction would narrow the allowance between the best well and the worst ones, and the margin is small now. Should salt water be injected into the producing formation, as some advocate? The Texas Railroad Commission will hear a discussion of the East Texas problem and these angles next Friday. Our representative will be there, and we are happy to be able to present the facts to the industry quicker than any other magazine.

E. Eng Lib
direct

This Week

Oklahoma Symbols

SOUTH from the Oklahoma capitol building runs Lincoln boulevard, two way traffic, center parking area and beautiful homes to the left.

The center parking became a spot for five locations as the drilling campaign of the north extension of the Oklahoma City field neared its close.

Symbol of the state, as some sculptor had it, is the rearing brancho. More appropriate, however, are the derricks, which now surround the building.

THE long-term prospects of the oil industry are intertwined with the outlook for industry as a whole. Consequently, oil men and the oil industry cannot logically plan ahead without considering the general economic prospects. So far the tide of business expansion is still coming in. But history indicates that eventually it will turn. Among the things the oil industry can do, in precaution, is to continue holding storage down, so that supply can be more readily cut back when consumption begins declining.
Page 14.

RECENT drops in the average bottom-hole pressure of the East Texas field indicate that operators there are confronted with the problem of arresting the decline at once. This is expected to be the most important discussion at the next Texas state-wide proration hearing March 19 in Austin. Some are advocating the use of salt water for repressuring the sand and others the reduction of the top allowable.
Page 10.

MAJOR oil company witnesses told a joint Legislative Investigating Committee last week that the differential in West Texas crude prices and those in other sectors of Texas were justified because of the characteristics of the crudes produced. Figures were presented showing the cost of refining crudes from various areas and the type of products derived from processing. It was pointed out that there is a 45 cent differential in cost of East Texas crude and West Texas oil at tidewater.
Page 11.

PRORATION on a gravity basis is the latest proposal. Kansas operators complaining about methods of taking well potentials, and seeking a way out, had this offer. It is predicted that the deeper wells in Kansas produce the heavy oil. If more heavy oil is permitted to be produced, automatically the deep wells get preference. Sounds too simple to avoid a threatened law suit.
Page 10.

CURRENT SITUATION

Outlook.—Increasing crude stocks are disturbing.

Crude Market.—Remains steady.

Refined Oil Markets.—Gasoline and fuel oil prices lose ground.

Crude Production.—Again at new peak; 3,381,600 barrels daily.

Crude Runs to Stills.—Down 155,000 barrels to 2,930,000 daily in week ended March 6.

Crude Stocks.—Up 547,000 barrels in week ended February 27; gain of 2,737,000 in 4 weeks.

Gasoline Stocks.—Up 1,316,000 barrels in week ended March 6, to 80,102,000; new peak.

Gas and Fuel Oil Stocks.—Down 419,000 barrels in week ended March 6, to 99,115,000 barrels.

Drilling.—Completions up 4 last week; total 520 wells.

See **MARKET SECTION** *for Details*

MAYBE it is counting chickens in the eggs, but "who gets the royalty on oil produced in the open ocean?" is in the way of being a fair question as operations get under way off the Texas coast. Preliminary sketches indicate that King Neptune is taking some advance money on the drill site.
Page 83.

THE executive committee of the IPAA warns the industry that production must not be permitted to continue increasing, and that excess gasoline stocks must be reduced.
Page 12.

IF new and yet undiscovered fields are not developed, the supply of oil in this country will be exhausted in 15 years. Such was the declaration of Captain H. A. Stuart, director of petroleum reserves of the Navy Department, in testifying before a committee hearing on the Walsh bill, which would conserve all naval oil reserves by having the government acquire through purchase or exchange all those now held by private interests.
Page 12.

MICHIGAN has its uncertainties. Short time ago production had so dropped that refineries there were adjusted to Mid-Continent oil. Now with winter still lingering, 50 tests are active in the new Buckeye field of Gladwin County and three are being added daily. Operators see possibilities of ruining their crude market unless a halt is called.
Page 91.

CONFIRMING reports that have been available from week to week, the Bureau of Mines is out with figures showing January production at an all-time peak. Runs to stills also were at a record while imports dropped, resulting in lower crude stocks and only a slight gain in refined products.
Page 62.

Protest Kansas Test

POTENTIAL METHOD FIXES FALSE FIGURE AND HURTS PRODUCTION

Wichita.—A threat to test the authority of the Kansas Corporation Commission in its requirement of demanding physical output tests of oil wells for determining potentials was made here Thursday by J. H. Tatlock. He filed formal notice that he will no longer subject his wells to these tests and outlined his reasons for declining to follow orders.

The hearing was called primarily for considering means of granting higher allowables to deep wells. When testimony had been completed on this the meeting was thrown open for consideration of whatever oil producers desired to submit. The method of taking potentials, which has met recent objection, was one of the first to get consideration. Methods of plugging wells, protection of soft underground waters and other subjects also were considered.

Tatlock first filed his statement after outlining its content. Upon being urged he read it in detail. His reasons for deciding to take no more potential tests by the actual output method were:

Necessity for acidizing in order to gain the highest possible rating; expense of installing heavy pumping equipment for the test, although this is not needed for normal production; damage to wells by water coning; establishing excessive potential figures which are no proper indication of what the prorated fields will produce; detrimental effect of this excessive potential on the price structure.

Cites Water Intrusion

He cited wells in the Silica field, Rice County, which had no water intrusion until the second and third potentials had been taken in keeping with orders of the commission. "It is my opinion," he added, "that producers in this field would have recovered much more oil if potentials had not been taken in this fashion."

Along with his direct charges was a suggestion that output in Kansas be kept in line with recommendations of the United States Bureau of Mines. He said the method of taking potentials had set up a potential total of around 1,800,000 for Kansas when in fact the state could properly produce around 300,000 barrels daily. This was his basis for the charge that the method of taking potentials was depressing on the price structure.

The statement drew both a reply and a plea from Homer Hoch, chairman of the commission.

No Workable Plan

"You must consider," he offered, "that we had to start with the law we had, which provides for ratable taking on potentials. I confess that I have not been pleased with the custom of producing a well to its limit for 24 hours in order to determine its potential. A graduated decline curve seemed better to me. But we have never had another workable plan suggested. If anyone has such a plan we want to know it.

Dissatisfaction over the physical output method taking potentials was so pronounced that the commission agreed to hold a hearing on it within 60 days. Meanwhile a committee of producers will compile records and suggested methods in order to present definite plans. The commission chairman will name this committee, which will have authority to name engineering sub-committees.

Means of granting higher allowables to deep wells, the chief cause of the meeting, brought no decision, although it is likely that changes will be made if legal methods can be found. At the close of statements on this subject, Chairman Hoch asked all producers to have legal departments submit opinions on this phase of the subject.

Inability to produce deep wells of Western Kansas at a profit on present allowables brought this subject before the meeting. Two methods were suggested. One was that higher allowables be granted on a scale graduated with the gravity of oil. Oil in most Western Kansas fields has lower gravity the deeper it is found, a condition contrary to that generally prevailing.

More Allowable for Deep Wells

J. H. Stewart, The Atlantic Refining Company, offered this as a suggestion. He said he had no fixed opinions as to ratios but thought differences in gravity could be used as a basis for establishing equality between wells of different depths. He mentioned one percent higher allowables for each degree of gravity drop.

The other method was that of granting higher allowable on a depth basis. On this Cy Dean, Olson Drilling Company, outlined the problem of producing one of the two wells his concern recently completed in Clark County. On the percentage of potential basis, it is not possible to pump the well profitably. It would be possible to produce more oil by classifying it as a minimum well, although this would not be sufficient to pay producing cost. He said no further drilling would be done to the 6500-foot level until higher allowables are possible.

Chairman Hoch called attention to the fact that any higher allowables granted to deep wells would mean corresponding deductions from shallow wells, since the state must hold to a gross allowable.

Not Making Allowable

This brought complaints against a condition wherein many fields are incapable of making allowables and are being carried with under production to be made up later. C. M. Fitzwilliams, Allison & Fitzwilliams, enumerated fields of this sort, citing figures from records of the commission to show that several fields had failed for six months to make their allowables.

D. M. Knowlton, Phillips Petroleum Company, filed a list of 32 pools which came under this general classification. He suggested that these fields be given 30 days of production without restrictions in order to determine what they can do. He said he thought this would establish the feasibility of removing many of them from supervision, which would allow the commission's field force to give more attention to newer fields.

Those who objected to carrying fields with substantial under-production admitted that the state could gain no higher total daily output by reducing these allowables. But they contended that what these fields are now failing to make is being taken by other fields and that the division among fields with over-production is not equitably distributed.

EAST TEXAS FUTURE

May lower allowable or try water injection

Austin.—Because of recent drops in East Texas bottom-hole pressures, the problem of arresting this decline is expected to be the most important subject that will be discussed at the Texas state-wide proration hearing March 19 at Austin. It is feared that unless some step, either repressuring or a reduction of the allowable, is taken that the field will enter a period of rapid decline at this time.

The Texas Railroad Commission has indicated that it will take up at that time the question of using salt water, produced along with the oil, to repressure the sand.

Pressure Is Declining

At the hearing last month, commission petroleum engineers reported a five-pound drop in the average bottom-hole pressure for the field, and indicated that unless the decline was arrested during the succeeding month, a cut in the top allowable for the field would be proper.

Because such a reduction would narrow the allowance between the best producers and those marginal wells now allowed 20 barrels a day, commission officials have no desire to make a cut if it can be avoided. At the same time, East Texas producers would be receiving a cut while allocations to other flush fields would be increased.

Should the commission make extended tests to determine the feasibility of the salt water disposal plan, it is entirely possible that any change in the East Texas allowable would be delayed for two or three months.

Because the market has absorbed increases granted during the past three months, observers in Austin see no reason to expect cuts during April other than for the purpose of preventing waste. April nominations filed by crude purchasers at the February hearing indicated a slightly higher demand than did March nominations.

The purchasers who are filing these reports are responsible concerns able to fulfill any commitments that they make, and it is likely the commission will continue to grant any increases that are sought providing the demand appears to be final.

Price Justified

MAJORS STATE WEST TEXAS CRUDE NOT AS VALUABLE

Austin.—Major oil company witnesses explained last week to the joint Legislative Investigating Committee that the differential in the price between West Texas crudes and those produced in other sections of Texas are justified because of the characteristics of the crude. Those testifying agreed that it might be possible to obtain the yields estimated by Dr. W. L. Nelson of Tulsa, who appeared a week earlier, but they presented figures to show that it was unprofitable to process crude and obtain the particular products Nelson would derive.

The gist of Nelson's testimony was to the effect that gasoline is the most profitable product, that refiners could produce large volumes of gasoline from West Texas crudes, and that for this reason there is greater profit in processing these oils than could be derived from East Texas crudes at the present posted price.

Yield Is Lower

R. C. Rich, chief chemist for Shell Petroleum Corporation, testified his company did not obtain these yields because it has a market for all the products, and this market must be furnished with a steady supply at all times. He pointed to figures prepared by the United States Bureau of Mines showing the average yield for the entire country, and that for Gulf Coast oil, and explained his company produced about the average in order to supply the market. These are shown in Table 1.

Rich declared that if the refineries produced all possible gasoline from the crudes processed, the market would be glutted with this product and there would be an under-supply of kerosene, distillate and other fuels.

Rich insisted that all West Texas crudes are sour, although Nelson had classified Sayre crude as sweet. Rich also asserted that for this reason his company made no kerosene from West Texas crudes, and that each of the products obtained had to be sweetened with products from other areas. The relative yields the Shell obtains from East Texas and West Texas crude are indicated in Table 2.

Shell Petroleum Corporation does not obtain as high profits from the West Texas crudes as Nelson estimated, even when all costs of reforming, treating, cracking and topping are considered. West Texas crudes cost 7 cents a barrel more to process than those from other sections of the state. Rich, taking an arbitrary refining cost of 25 cents for East Texas crude, said his company derived most profit from East Texas crude, as indicated in Table 3.

East Texas Worth More

Figures presented by W. C. Allen, statistician for The Texas Company, showed that East Texas products from a barrel of oil are worth 19 cents more than those produced from Hendricks crude. Refining costs on the other hand are 11 cents less, and transportation costs are 11 cents less, resulting in a 45-cent difference between East Texas crude and West Texas crude at tidewater. Allen pointed out that the difference in the posted price was only 41 cents, which he said gave the Hendricks crude a 4-cent advantage.

An estimated statement, presented by Humble Oil & Refining Company, largest purchaser in West Texas, was read by Hines Baker, who declared in part:

"The high sulphur content of West Texas crude makes it particularly undesirable from the refiner's standpoint because of (1) hazards involved in handling and processing the crude and products therefrom, (2) high corrosion rate on all equipment used in handling and processing the crude and products therefrom, and (3) the relatively undesirable quality of all products obtained from the crude due to their high sulphur content.

". . . Distillation and cracking equipment alone, when designed to handle West Texas crude, will cost 15 to 20 percent more . . .

"The high sulphur content of distillate products from West Texas crude adds materially to the cost of treating operations at the refinery . . . The special processes required to treat West Texas distillates are not available at most refineries, and, as a result, the crude cannot ordinarily be credited with kerosene yields . . . contrary to the opinion inferred by Dr. Nelson . . .

"Because of this . . . sulphur content . . . many refiners are not equipped to process this crude, and . . . have no demand for it.

"These considerations . . . have had the effect over a period of years of

[*Continued on page 85*]

TABLE 1

Bureau of Mines Average Yields

PRODUCT	Entire U.S.	Texas Gulf Coast	Shell Plant
Gasoline	44.1	43.0	43.5
Kerosene	5.3	6.8	4.3
Distillate Fuel	11.8	13.8	18.4
Residual Fuel	26.7	26.6	24.1
Refg. Fuel and Loss	12.1	9.8	9.7

TABLE 2

Relative Yield of East and West Texas Crudes

PRODUCT	East Texas	Sayre	Yates
70 Octane Gasoline	43.7	42.3	35.0
Kerosene	10 0	....	....
Distillate Fuel	15.1	21.2	26.8
Bunker "C" Fuel	22.9	28.5	30.9
Refg. Fuel and Loss	8.3	8.1	7.3

CONSPIRACY RULING

To determine whether 26 firms must stand trial

Madison, Wisconsin.—Federal Judge Patrick T. Stone is expected to rule this week on demurrers filed by defense attorneys in the government's "oil conspiracy" case, thereby determining whether 26 major oil companies, three trade journals and 71 individuals will have to stand trial here this summer on charges of violating the Sherman antitrust act, in that they allegedly conspired to raise the retail price of gasoline to abnormally high levels through operation of buying pools in the East Texas and Mid-Continent fields.

Most Plead Not Guilty

Pleas of not guilty have been entered on behalf of the companies and trade journals. Fifty-seven of the individuals entered similar pleas on formal arraignment here March 3, while arraignment of ten has been postponed. Four of the individual defendants refused to waive removal hearings in their home districts. The hearings have not yet been scheduled.

If Judge Stone overrules the demurrer, actual trial will start here some time after June 1. The June 1 date was set tentatively a month ago, but court observers believe it is questionable whether the government and defense attorneys can prepare their cases for trial by this date.

If the ruling on the demurrer is against the government, the government counsel may appeal directly to the United States supreme court. This step is not open to the defense.

Three Defense Motions Pending

Three other defense motions are pending before the court and must be disposed of before actual trial. Arguments on two of them have been started. The motions seek: (1) A bill of particulars from the government, clarifying the exact charges lodged against the defendants; (2) Release of grand jury witnesses from their oaths of secrecy, which would aid defense attorneys in preparing for trial; () Return of several tons of documentary evidence subpoenaed from oil companies for the examination of the investigating grand juries.

Oral arguments on these motions are to be completed in April.

TABLE 3

Cost of Refining Crudes

ITEM	Yates Deep	Sayre	East Texas
Posted Price of Crude Oil	.91	.96	1.27
Pipe Line Transportation Costs	.30	.30	1.75
Refining Cost	.32	.32	.25
Total Expense	1.53	1.58	1.695
Value of Product FOB Houston	1.652	1.731	1.853
Comp. Profit per Bbl. Houston	.122	.151	.158

OIL EXHAUSTION

In 15 years unless it is conserved says navy man

Washington, D. C.—The specter of exhaustion again hovers over the oil fields of the United States, members of the Senate Naval Affairs Committee were told this week by Captain H. A. Stuart, director of petroleum reserves of the Navy Department.

Failing to develop new and as yet undiscovered fields, Captain Stuart told the committee March 9 at its first hearing on the Walsh bill for consolidation of the naval oil reserves, the supply of oil in this country will be exhausted in 15 years.

May Buy Control

The measure, introduced by Senator Walsh of Massachusetts, chairman of the committee, at the request of the Navy Department, is designed to conserve the naval reserves by acquisition by the Government, through purchase or exchange, of all lands within the reserves now held by private interests.

Declaring that the bill is one of the most important to come before his committee this session, Chairman Walsh said that extensive hearings would be held with a view to strengthening its provisions.

Captain Stuart's warning of exhaustion of our oil supplies within a generation was, he told the committee, "conservative."

"We have been making estimates for the last 25 years," he explained. "We always underestimate because of the possibility of discovering new oil fields. The best information is that the present supply will last only 15 years. That is a conservative estimate."

Government experts, he continued, estimate that the Government now has

[*Continued on page 79*]

PROMPT ACTION

Connally act is expected to be passed at once

Washington, D. C.—Prompt action on legislation making the Connally contraband oil act permanent legislation was forecast when the Senate Finance Committee met March 13 to consider its report on the measure.

Hearings on the bill were held last month over a period of four days by a special subcommittee under the chairmanship of Senator Connally of Texas.

It is expected that the finance committee will report the measure to the Senate early next week, and that it will be passed without difficulty. However, when the legislation gets to the House of Representatives opposition is anticipated from members from the oil consuming states.

PRATT TO SPEAK

Interesting program for A. P. I. Spring meeting

Dallas.—Wallace E. Pratt, vice president of Humble Oil & Refining Company, will address the spring meeting of the Southwestern District of the American Petroleum Institute Division of Production here April 1, on "Trends and Potentialities of Oil Development in Southwestern United States."

W. R. Boyd, Jr., executive vice president of the American Petroleum Institute in New York, and George A. Hill, Jr., president of Houston Oil Company and vice president in charge of the Production Division, will also address the meeting on subjects to be announced later.

M. J. Norrell, vice president of the Magnolia Petroleum Company, will deliver the address of welcome.

A new viewpoint on the taxation problem will be presented by Jake Hamon of Cox & Hamon.

Technical Program Subjects

An interesting technical program is in the course of preparation. The following papers will be presented: "Foundations and Substructures in the Gulf Coast," by W. F. Herbert, The Texas Company, Houston, Texas, and H. E. Anderson, Texas Creosoting

[*Continued on page 81*]

INDUSTRY WARNED

Production and gasoline output must be reduced

Oklahoma City.—If production continues to increase as in the past six weeks, it is certain to lead to waste, and excessive gasoline stocks now on hand must be consumed during the coming peak consumption period. These and other conclusions on the current situation within the industry were presented in a statement issued by the executive committee of the Independent Petroleum Association of America at a session of the body in Oklahoma City March 12. The statement follows:

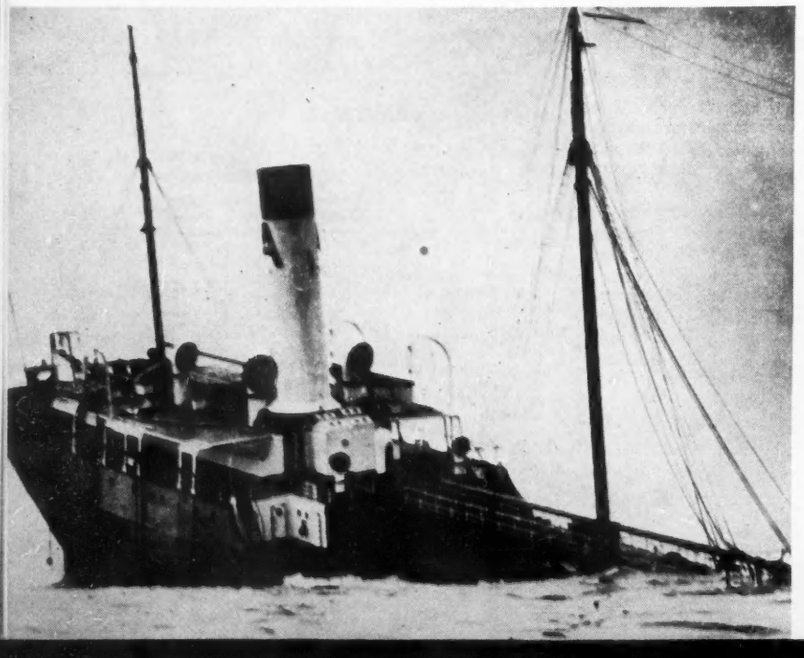
The independent producers throughout the petroleum industry are indebted to the Interstate Compact Commission and the regulatory bodies of the oil producing states for their very fine service to the industry in keeping before the various states the essential facts involved in the industry and thereby avoiding waste such as existed prior to the initiation of the Interstate Compact Commission. The conservation program, so essential to the welfare of the nation, has been furthered and advanced by the constant application of time and thought of those states and bodies who have been working in and with this commission, as a result of which effort the storage of crude petroleum that has heretofore been so wasteful had been reduced to a low point of 285,211,000 barrels, on the 23rd day of January, 1937, according to figures of the United States Bureau of Mines.

Production Is Gaining

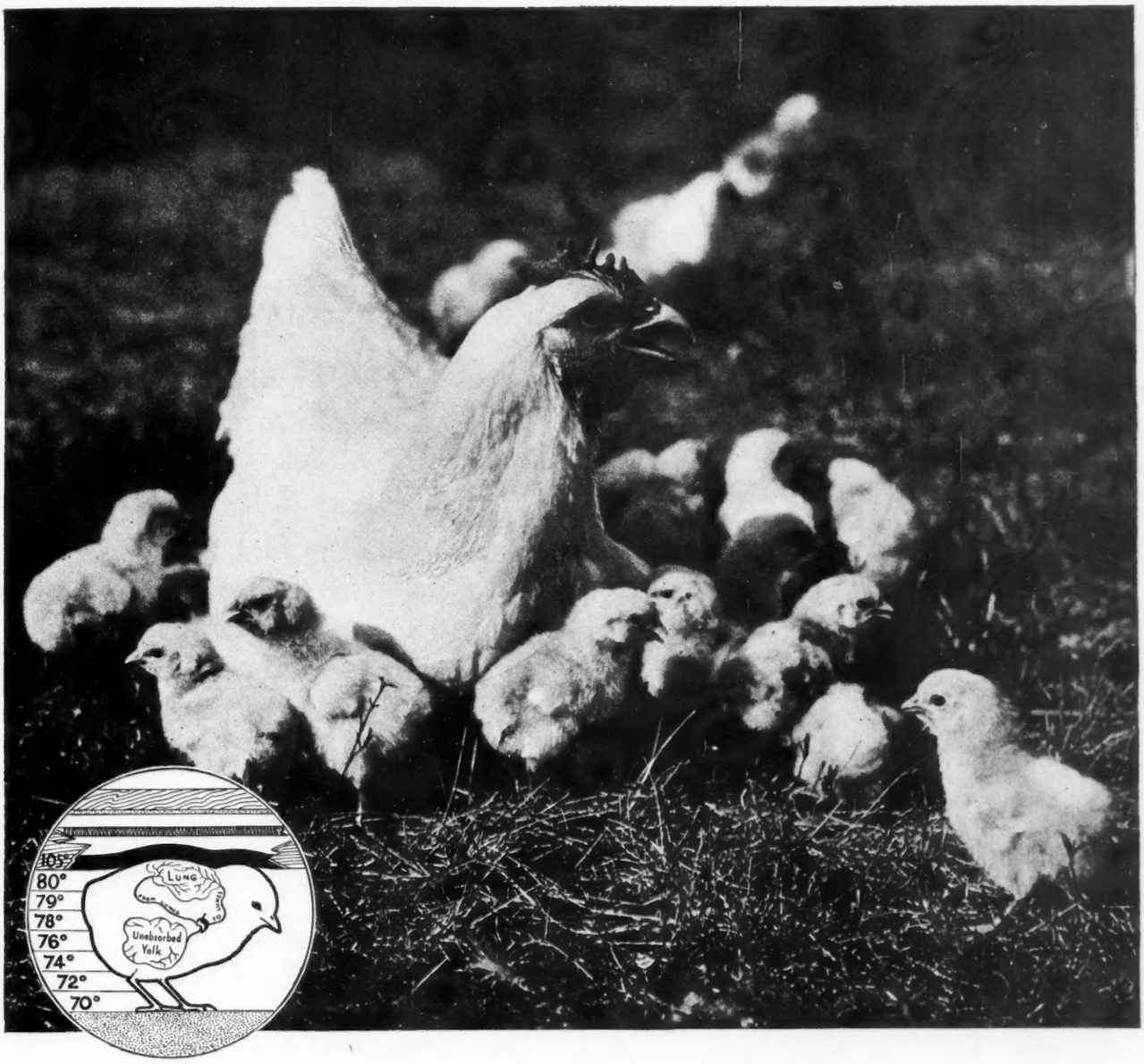
Attention, however, is directed to the fact that since the 23rd day of January, 1937, there has been a continuous increase in production, which if continued will again lead to waste. In this connection, the Interstate Compact Commission and the regulatory bodies of the oil producing states are respectfully urged to direct their attention to curtailing wasteful production so that production will not exceed consumptive market demand, and wasteful above-ground storage will be prevented. Special attention is called to the fact that on February 27, 1937, total stocks of crude petroleum had increased to 288,121,000 barrels. Stocks of gasoline at refineries, terminals and in transit had reached a total of 80,102,000 barrels on March 6, 1937, being 15,000,000 barrels in excess of the estimated sound economic level for gasoline stocks as of this date. Had this excess of gasoline not been refined there would have been added approximately 34,000,000 barrels more crude to storage. These excessive stocks must be consumed during the coming peak period of consumption. Attention is further respectfully called to the tendency of purchasers to file with the various state regulatory bodies nominations for the purchase of crude petroleum, and apparently too much reliance by such bodies has been placed upon these figures. Historically, the system of relying entirely upon purchasers' nominations has led to over-optimistic conclusions as to the consumptive demand for petroleum, and in

[*Continued on page 78*]

DAVEY JONES GETS OIL TANKER



View of tanker Frank Buck, showing sharp forward list a short time after it collided with the Dollar Liner President Coolidge in the Golden Gate at San Francisco. The crew of 40 had been taken off just before this picture was taken by International News Photo.



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Here is one more in the long list of new products, new profits made possible by the unusual developments Goodrich has achieved in rubber. As Goodrich compounds it, rubber is serving purposes and setting records unheard of a few years ago.

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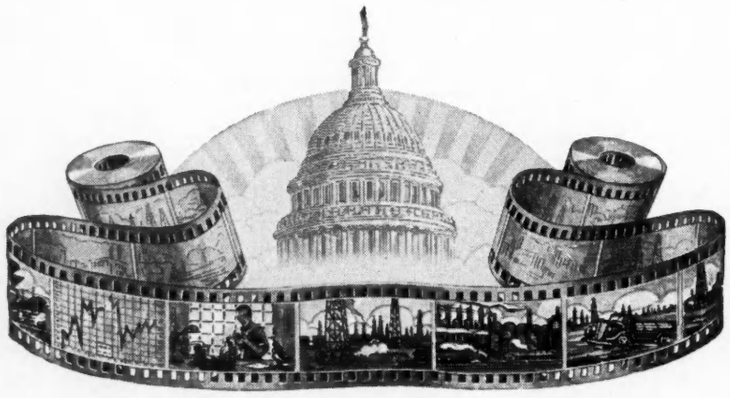
The Changing Panorama



Speculation on when the next business recession will get under way, and on what the oil industry can do to cushion the decline when it comes.

Edited by L. J. LOGAN, Associate Editor

AT THIS stage of the economic cycle, it seems increasingly important for the oil man, as well as every other business man, to foresee future trends as well as possible. For the tide of industrial activity has come in a long way, and it becomes reasonable to question how much higher it will reach, and when it will begin to recede.

Certainly, the oil industry cannot wholly escape the influence of the general industrial movement, as evidenced by the industry's experience in the recent past; and any appraisal of the long-term future of the oil business must take into consideration the general economic prospects, as well as the conditions and circumstances within the industry.

When Will Next Slump Come?

The oil man therefore seems justified in taking a direct interest in the question, "How far away is the next recession in business?" When will the rising trends of the past several years be interrupted? Will the wave marking the high tide leave its imprint on the sands in 1937, 1938, 1940, 1942?

Significantly, questions along this line generally are narrowed down to the time element. It is not being asked, "Will there be another depression?" It is taken for granted that there will be, despite the millions of words that have been written and said about the causes of the past depression and the many gestures that have been made toward eliminating such supposed causes and preventing another break-down. The question is simply, "When will the next one get under way?"

This attitude, tinged with pessimism, obviously springs from the assumption that the forces which caused depressions in the past also will cause them in the future; that any preventives now being employed will not be able to hold the mighty and complicated economic forces when the tide begins to ebb.

Moreover, it is reasoned by some that the next recession will be farther than the past one. This reasoning is based on the assumption that the severity of the recent depression was due to the increased complexity of the economic structure. Logically, still further complexity of the structure might lead to more severity of the next recession.

Immediate Future Promising

Although there have been some warnings lately that important complications may arise as early as this year, the preponderance of circumstances is on the side of a continuation of the rising trends at least through 1937. This year appears fairly certain to conform with the general expectations of showing further improvement. In nearly all lines, including the oil industry, the 1937 results are surpassing those of 1936.

Furthermore, there are numerous factors that point to continued rising trends, as against fewer circumstances indicating any serious interruption of those trends.

On The Darker Side

A professor in the school of commerce at the University of Oklahoma recently predicted that general business will recede by the summer of 1938. He asserted that the present up-swing is to a great extent artificial, resulting partially from heavy government spending on borrowed money, which cannot continue indefinitely; and from heavy installment buying by the public, which reduces future buying power. Last year's retail sales, he said, included about five billion dollars based on installment plans.

Other artificial stimulants to business also are be-

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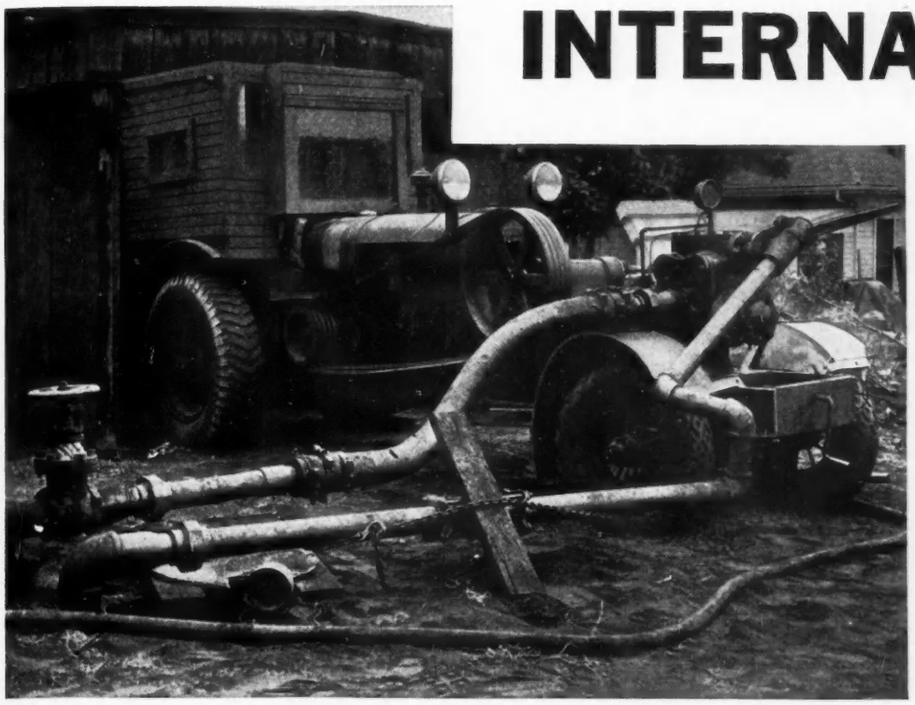

At Left: The Davon Pipe Line Co., has transformed this International I-30 Industrial Tractor into a traveling pump which makes the rounds of 10 wells every 6 days pumping oil from the wells into adjacent tanks. The tractor travels several miles over its route. When it arrives at a well the pump is quickly hooked-up and 1350 gallons of oil are pumped into the tank in about 5 hours.

The increasing ACCEPTANCE of International Industrial Power by experienced operators is *proof* that this organization is building to their requirements. On job after job, the *tough* work is being given to International Power. Users know that when RESULTS are needed, it is good business to depend on International.

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An International Power Unit pumping a 4200-ft. well for Sutton and Hawkin at Taico, Texas. These multiple-cylinder engines provide low-cost power for pumping and other stationary power work.

INTERNATIONAL HARVESTER

ing pointed out currently. Advance buying for protection against labor troubles is an important factor cited, and others include buying ahead of needs in the fear of higher prices, and the world-wide buying of war materials. It is felt by some that so much forward buying may bring about excessive inventories within several months and an accompanying let-down in production and sales.

Furthermore, those leaning toward the side of caution or pessimism assert that business men's confidence has been impaired lately by the trends toward "liberalism" in government and in public opinion. Business activity and industrial expansion are being retarded and threaten to be interrupted, it is asserted by some, through the prospects of "liberal" social legislation, upheld by "liberalized" courts, that would bring regulation of wages, working hours, and prices, and thus interference with the normal economic conditions.

The Brighter View

On the other hand, there are various circumstances that seem to minimize the above unfavorable factors and to make them appear only as temporary difficulties that will be trampled down in the march onward and upward.

These favorable circumstances include particularly the further gains in employment, with activity embracing not only the consumer goods industries but also an increasing toward normal in the heavy goods industries.

Throughout industry, in fact, results are continuing on the up-grade.

That business will show still further profitable expansion, moreover, is indicated by the recent action of the securities markets, which are supposed to reflect moneyed foresight and to evaluate rather accurately the prospects for some time ahead. The bull market that has prevailed for nearly five years recently has broken into new high ground for both the industrial and railroad groups of stocks, indicating to one school of chart followers that prices are destined to go still higher.

After 1937, What?

Beyond 1937 the outlook is generally admitted to be obscure. Even those who feel confident over the prospects for this year hesitate to take, at this juncture, so favorable an attitude toward 1938. Instead, it is generally figured that business men should make the most of favorable opportunities of this year; that this year may give better returns on efforts than will be available in the ensuing years.

Nevertheless, there is a widely held opinion that conditions will be generally favorable not only through 1937 but also at least through 1938, 1939, and possibly 1940.

Turning Point Around 1940 Expected

In the opinion of a considerable number of persons, an important business recession may begin as early as 1940 or 1941.

Some of the loans for building within the past two years apparently were based on the hope that conditions would remain stable at least until about 1940, by which time the loans would be materially reduced and more in line with possible declining market values.

An official of a large manufacturing corporation recently went on record with a prediction that the next major business recession will get under way in 1941.

The years 1940 and 1941 apparently are favored in such predictions largely because of the history of past business cycles and the apparent general conformity of the present cycle with those of the past. Certainly, the former cycles are being repeated, generally, in the present trends; and if history continues to repeat itself, a reaction is inevitable not many years hence.

The most recent cycle embraced the drop from the peak of 1920, sharp but of short duration, and the subsequent advance to the peak of late 1929—a period of nearly 10 years. If the present cycle should follow a similar pattern, from the peak of late 1929 to the trough of 1932 and back to another peak, the new high point would be reached around the beginning of 1940.

In some of the text books on economics, even before the recent depression started, it was stated that the recurring business cycles showed an average duration around 11 years.

Possible Precautions in Oil Industry

Assuming that the above possibilities are fulfilled even only partially, there are numerous things that should or should not be done by the oil operator, oil company, and oil industry as a whole.

Particularly, the companies and the industry may take precautions to maintain as well as possible the advantageous position that is now occupied with regard to inventories and the balancing of supply with demand. For past experience testifies that it is easy to expand supply to meet increasing demand, but difficult to curtail supply to conform with declining demand.

Thus the industry, while rejoicing in current all-time record volumes of business at favorable prices, may well guard against enthusiasm that would lead to over-drilling, over-producing of crude, over-building of refineries, over-expanding of retail outlets. While further expansion may be needed to take advantage of the large available business this year and several more years, the consumption of oils may not be counted upon to continue increasing indefinitely, without interruption.

Improving prices of crude oil naturally are stimulating drilling. So far, the field work is about in line with the heavy gains that have occurred in consumption and production of petroleum. But the drilling must be kept in such a favorable relation if there is to be continued effectiveness in holding supply within demand.

Until a few weeks ago there was remarkable success in balancing crude oil production with the existing demand, and crude stocks were being reduced, although already at the lowest proportions for many years. But lately the restriction of crude production has become less strict, and crude has been going into storage. The industry at present can, perhaps, retain strong markets in the face of additions to storage. It even could, perhaps, continue building up crude storage for several years without materially impairing its markets. But if the industry can hold on to its advantageous inventory position, it will be generously rewarded when the recession begins and when difficulty is encountered in cutting back production to conform with shrinking demand.

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Well end 10′. Pitman end 9′9″.

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Fully enclosed oil bath, dust and oil tight. Self aligning double roller bearings on wrist pins.

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MEN IN THE INDUSTRY'S NEWS

GEORGE H. LANG RESIGNS FROM STANDARD OIL COMPANY OF NEW JERSEY TO JOIN GEORGE MANAHAN COMPANIES

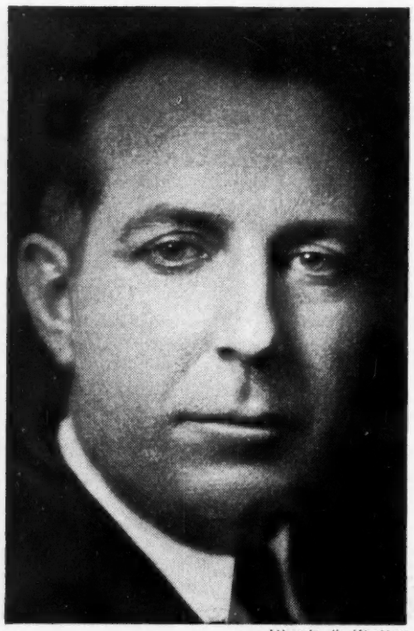
»

LANG WILL RETURN FROM NEW YORK TO TULSA

»

GEORGE H. LANG, who has been assistant to Eugene Holman, manager of production for all Standard Oil Company of New Jersey subsidiaries since January 1, 1936, resigned effective March 15 to become assistant to the president and general manager of the land and leasing department of Manahan Oil Company and Manahan Drilling Company. George A. Manahan is president of the two companies. In his new position, Lang will return from New York to his old home in Tulsa.

Lang, who served 20 years with Carter Oil Company, Standard Oil Company of New Jersey subsidiary, started with the company as field scout in Oklahoma. Later he was made chief scout and then executive assistant to the president. When transferred to New York he continued as Carter Oil Company vice president and was its representative in the parent concern. Manahan Oil Company, and its affiliated firm, Manahan Drilling Company, are among the more successful independent operators in the Mid-Continent.



Blank & Stoller

GEORGE H. LANG

JOHN W. GILLILAND has been named president of General American Oil Company, succeeding Ralph G. Tripett, who has sold his stock to the company. The firm, which was formed a year ago when several independent operators merged, has 225 producers on 47 leases and several small refineries and gasoline plants. Most of the holdings are in the East Texas field. Headquarters are maintained at Shreveport. At one time Gilliland was president of Gilliland Oil Company, which was a large independent concern. A. H. Meadows and M. E. Wilson of Shreveport are vice presidents of General American Oil Company.

J. D. WHEELER, formerly petroleum engineer for Ohio Oil Company in Yates pool, Texas, has been transferred to the Tulsa offices of the company, and will be in charge of petroleum engineering.

J. S. CULLINAN, Houston, head of American Republics Corporation and organizer of the first pipe line and refinery company in Texas and one of the organizers and the first president of The Texas Company, died of pneumonia March 11 in Palo Alto, California.

Withdrawing from The Texas Company in November, 1913, Cullinan started the Farmers Production Company at Humble in 1914. This was absorbed in 1916 by American Republics Corporation, another Cullinan enterprise which came to control Petroleum Iron Works of Lima, Ohio, in 1919.

His social, professional and civic club affiliations were many. Among these were the American Petroleum Institute and the American Institute of Mining and Metallurgical Engineers.

Cullinan is survived by a son, Craig; and three daughters, Miss Nina, Mrs. A. J. Wray and Mrs. Rorick Cravens; a brother, Frank Cullinan, all of Houston; three sisters, Mrs. Jane C. Sawyer of Washington, D. C., Miss Anna Cullinan and Miss Mary E. Cullinan, both of De Land, Florida, and seven grandchildren.

J. G. "JERRY" FARQUHAR, 55, executive vice president and a director of Plymouth Oil Company, died suddenly March 11 at his home in Pittsburgh, Pennsylvania.

In the coal business in Pittsburgh for a number of years, Farquhar's entry into the oil business was a natural one. He was made vice president and treasurer of Plymouth Oil Company at the time it was organized in 1923 by J. C. Trees and M. L. Benedum, world famous wildcatters, and associates. Upon the death of Levi Smith in 1932 he was made president of Big Lake Oil Company, in which Plymouth Oil Company owns three-fourths of the stock.

His two sons, W. C. and James P. Farquhar, and his son-in-law, Donald McMillan, are associated with the Benedum and Trees interests. in South Texas.

M. O. ATTEBERRY, office employe of Lone Star Gas Company, has been transferred from Ranger to North Texas to scout wildcat operations underway in counties bordering the south bank of the Red River.

GEORGE C. McGHEE Rhodes scholar graduate of University of Oklahoma, now researching in Oxford for a Ph.D., who was formerly with Atlantic Oil Company and Continental Oil Company doing geological and seismograph work, respectively, presented recently before the Geological Society of London a lecture on the first reflection seismic survey in England, done in connection with current exploratory work of Anglo-Iranian Oil Company there.

MARVIN H. URBANKTE of Houston, civil engineer with Humble Oil & Refining Company, died March 10, in Paris, Texas. Funeral services were held in Houston March 12, with burial in Forest Park cemetery.

CLARK S. FRAMPTON, 50, employee of Magnolia Petroleum Company in the East Texas field, was fatally injured in an automobile accident March 10 near the north end of the field. C. W. Tucker, fellow employee, and Charles Earl Steele, Roy I. Davis Pipe Line Company, were injured in the same mishap.

F. L. FLETCHER has disposed of his oil interests in Montana and has accepted a position as drilling foreman with International Petroleum Company, Ltd., at Talara, Peru. Mr. and Mrs. Fletcher are sailing for Peru from San Francisco on March 19.

E. A. WAHLSTROM, Fort Worth division engineer for Stanolind Oil & Gas Company and an employe of the company and its predecessors for 11 years, has resigned to become chairman of the Engineering Committee created by operators in the Goldsmith field, West Texas. He will be succeeded by George C. Card, petroleum engineer attached to Tulsa division of Stanolind Oil & Gas Company.

Working on a full-time basis, Wahlstrom will assume his new duties immediately. Goldsmith field operators endorsed the plan of engaging an engineer at a Texas Railroad Commission hearing held at Midland last January to make periodical bottom-hole pressure readings, determine most efficient casing programs with a view of curbing gas/oil ratio of producing wells. Other fields in West Texas and Southeastern New Mexico have engineers employed, with all operators sharing the expense. An office building will be erected in the Goldsmith field.

Wahlstrom is a graduate engineer and geologist of the University of Colorado. He entered the services of Midwest Refining Company upon receipt of his degree, and during the past 10 years has been in close contact with engineering practices in New Mexico and West Texas fields.

WILLIAM H. (BILL) DUNNING, JR., 43, Fort Worth operator and former drilling contractor who amassed a fortune through the discovery of the Gulf-McElroy field, was fatally stricken March 5 by a heart attack in his hotel room at Odessa, Texas. He was visiting the latter

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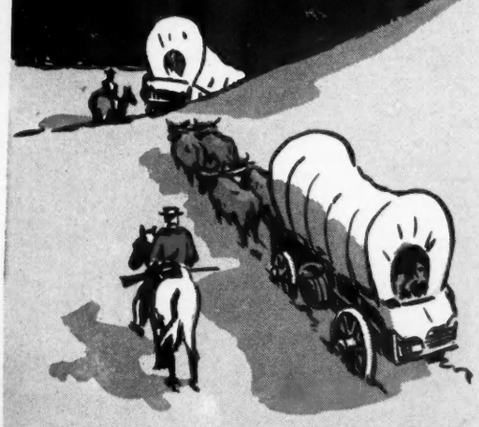

The American Buffalo, symbolizes our policy of pioneering new products, better methods and advanced ideas; characterizes our western, aggressive, open-minded spirit of competitive industry; portrays our stability and strength as a leader in our field; and suggests the challenge—which we are always eager to accept—to increased responsibilities, more useful service, and greater achievements.

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city in connection with the launching of a major drilling program on his leases in the nearby Goldsmith field.

Drilling experience was gained by Dunning while working on rigs during the Burkburnett boom. He acquired several strings of tools, and contracted work on the Worsham ranch in Clay County during 1923 and 1924. He shifted to West Texas the following year. Fortified with ability to make friends, he obtained option to lease nearly all of the J. T. McElroy ranch for the drilling of a 3500-foot test. In March, 1926, Gulf Production Company paid Dunning $85,000 cash for lease on 28 sections, and assumed the exploratory obligation. The discovery well was completed 4 months later. Dunning later completed one well on acreage retained within the block, then sold all of his interests to Gulf Production Company for a large sum, payable over a long period.

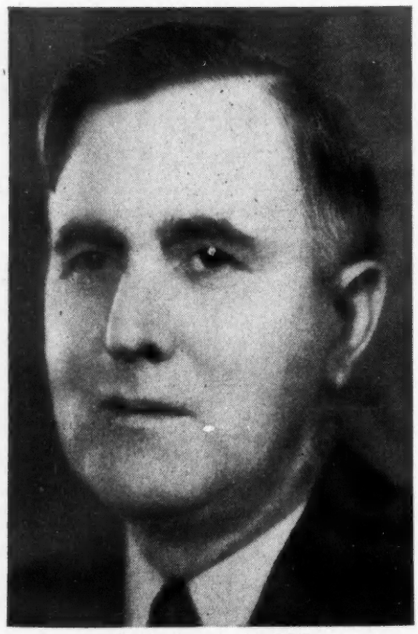
Dunning is survived by his wife, father, three brothers and one sister. Funeral services were held March 8 at Fort Worth.

A. A. PEREBINOSSOFF, Societe de Prospection Electrique, Procedes Schlumberger, Paris, France, was due to have arrived in New York last week. From there he will visit Houston and fields of the Texas and Louisiana Gulf Coasts.

FORD TURNER, West Texas district land man and scout for Pure Oil Company, has been transferred from Odessa to Fort Worth to become assistant manager of the land department of the Texas Producing Division.

THOMAS F. GEARY, for 20 years in charge of the pipe lines of the New York Transit Company in the Allegany, New York district, died March 3 at the age of 95 at his home in Allegany. He was retired on pension 20 years ago.

Named Gas Manager



GEORGE A. BAIRD

GEO. H. BAIRD, general superintendent of the natural gas division, has been named manager of Cities Service Gas Company, effective March 4.

Baird has been an Empire man for over 20 years. He joined the old Quapaw Gas Company as a meter tester, April, 1916, and except for time out for army service, has been continuously employed.

He was graduated in mechanical engineering from Kansas State College in 1914, and spent one year with Westinghouse Electric & Manufacturing Company before joining the Empire organization. He became superintendent of the meter department in 1922; served as industrial fuel engineer to 1927, then as operating engineer to 1929, and was superintendent of operations until 1935.

E. E. SWOPE, general manager of refineries for Magnolia Petroleum Company, Beaumont, has been elected vice president and added to the board, according to announcement by D. E. Little, president. Swope has been employed by the company since October, 1917, having directed construction work at the Beaumont refinery as chief engineer for a period of years, and in 1928 was advanced to junior assistant general manager. In 1935 he was promoted to senior assistant to E. E. Plumly, and became general manager of refineries shortly after the latter died on February 7, 1936.

JOHN M. RUSSELL, 44, and Weldon Osborn, 25, members of an engineering field party employed by Sun Oil Company and stationed at McAllen, Texas, were killed instantly March 7 on the Monterrey-Reynosa Highway, Mexico, when their car collided with a truck. Williams Bills, third member of the engineering party, was injured.

F. D. BREEDLOVE, chief gauger for Magnolia Pipe Line Company in the Panhandle, North, Central and West Texas, has been transferred from Wichita Falls to Alice, Texas, to fulfill a similar position in the Southwest and Gulf Coast areas. He will be succeeded by N. J. Jacobi, veteran North Texas gauger, as chief gauger in the former district.

MARK L. REQUA, 71, California oil man and honorary member of the American Petroleum Institute, died in a Los Angeles hospital March 6. Funeral services were held in Santa Barbara, where he has lived for several years. Requa served as Republican national committeeman from California from 1932 to 1936 and national director of the oil division of the United States fuel administration during the world war.

A. N. HORNE MADE MANAGER OF EMPIRE COMPANIES' OIL PIPE LINE DIVISION, SUCCEEDING F. K. HASKELL, RESIGNED.

A. N. HORNE

W. A. FISHER MADE ASSISTANT MANAGER UNDER HORNE

A. N. HORNE has been appointed manager of the Empire Companies' oil pipe line division, succeeding F. K. Haskell, and W. A. Fisher will become assistant manager. These changes, effective April 1, are announced by H. R. Straight, vice president and general manager of Empire Oil & Refining Company.

Horne entered pipe line service in 1919 as a laborer in a construction gang. He served as timekeeper and as field gauger in various districts. From 1922 to 1927 he was district superintendent of the Duncan, then of the Ponca-Cushing district. He was transferred to Bartlesville the first of 1927 as superintendent of pipe line operations, and in 1929 was made general superintendent.

Fisher first came to the Empire with the acquisition of refineries of the Ponca Refining Company in 1916. He was with the Evans-Thwing Refining Company at Wichita in 1918, and came back with the Empire in the oil pipe line division in January, 1919.

W. A. FISHER

Bulldozer Speeds Lease Walk Construction Job

By ELTON STERRETT, Engineer

TRUCK mounted and powered bulldozer permits company to drive 150 posts daily in constructing sturdy walkways to 40 wells located in swampy country.

READY access to river-bottom and other low-lying leases must be maintained, regardless of flood stage of water or long continued periods of rain, either of which renders the usual type of lease road impassable and greatly slows down the rounds of gaugers, switchers and other production employes who must resort to boats and hip boots to make their regular and frequent trips to lease tanks, separators and to flow the wells themselves if production schedules are to be kept up.

On one of its East Texas leases lying in a section of the bottoms subject to inundation whenever the Sabine River gets over its banks, and formed of a mixture of soils which makes foot progress difficult even after a rain, Arkansas Fuel Oil Company solved the problem of getting men to the various wells as many other companies before it have met the difficulty, by building walks on "stilts," elevated above high water and tying-in all the points on the lease which can not be reached otherwise.

The walk decided upon was to be carried on supports made from scrap two-inch pipe, each bent consisting of two vertical pipes, one extending to walk level, the other three feet higher to afford support for a hand rail. At the predetermined level a cross member of two-inch was tack-welded to both uprights, the walkway itself being bolted to these cross members through holes cut in the pipe with the welder's torch.

Nearly five miles of walk was required to connect the 40 wells and the two pumping stations on the lease. Pipe bents were to be spaced at nine-foot intervals, or two to each 18-foot length of wolmanized plank used to floor the walk itself.

The task of driving approximately 5400 pipes into the ground from two to three feet per pipe was begun in the usual manner—employing a crew of men with sledge-hammers and dollies. As a staging was required

Driving posts for elevated walk. Three-inch pipe welded below the hammer weight serves as a guide to direct the blow.

to start each upright and the work heavy, progress was slow, the labor cost high, and difficulty was met in maintaining the desired alignment of posts.

To speed up the work and mechanize much of the former hand labor, an "Iron Mule," as the device was dubbed by the men on the job, was designed and built by the production force.

A tripod, formed from two-inch pipe, was welded together so that two of the legs could be bolted to either side of the maintenance truck, in such a way as to allow hinged transverse movement. The third or back-leg was carried at its lower end in a sleeve of 2½-inch pipe, pivoted to the opposite side of the truck frame, both sleeve and back-leg being drilled through at intervals of six inches so a pin could be slipped through registering holes and thus retain the open side of the frame at any desired degree of overhang from the truck body.

Suspended from a pulley swivelling in the head of the frame is the driving hammer, a 24-inch length of six-inch band wheel shaft, carrying at its base or driving face a guide which slips over the pipe to be driven, thus directing the blow of the 200-pound hammer directly in line with the end of the pipe being driven.

Power for the hammer is obtained from the truck motor, the chain normally used to drive the truck winch being removed to permit chain drive of a shaft extending the long way of the truck bed, being supported on two bearings and carrying on its end away from the sprocket a standard cat-head.

The weight, slung on an old derrick line, is raised by tightening the turn of the line around the revolving cat-head, and dropped by the operator slackening the tension in his end of the line.

With the truck motor regulated to about the speed required to drive the vehicle in high gear at 12 miles per hour —as the truck was geared approximately 800 revolutions per minute of the motor shaft—a theoretical maximum of around 30 strokes of the hammer per minute is possible, though that figure was rarely reached in practice, due to the constant shifting required to keep up with the progress of the work.

Requiring a crew of only five men, one truck driver, one hammer-man at the cat-head, another in the A-frame to guide the hammer onto the end of the pipe and check its operation, and two "sighters" or plumb-bob men, one stationed along the line of the walk and the other at right angles thereto to supervise accurate perpendicularity of the post as driven, the entire operation of placing the post—done by the two "sighters"—driving it to gauge and moving to the next site required approximately two minutes. A normal day's driving averaged about 150 posts, due to the fact that the truck powering the hammer was also used for handling men to and from the job and for hauling all pipe and other material used in the walks.

Cooling of the cat-head was maintained by filling it at intervals with water through the aperture seen at its center. The hammer-man quickly acquired the skill to handle his line without burning it, and without allowing it to run slack enough to begin its lift with an unnecessary jerk. Between posts the hammer was slung from a hook at the frame head to eliminate the need of its being held aloft by slipping the line on the cat-head during the many shifts of position on the job, and in this way any cause for excessive wear on either rope or cat-head was avoided.

Sighting along a 3300-foot reach of lease walk. This view shows breaking joints at alternate bents to relieve strain on ends of planks.

METHOD FOR ECONOMICALLY

Sinking Oil Shaft

IN HAENIGSEN-NIENHAGEN

By WALTER SACK

GEWERKSCHAFT ELVERATH, Hannover, Germany, was the second concern in Europe to undertake underground development of oil structures. The company profited by the experiences gained in the development of this kind at the first oil shaft in the Wietze-Steinfoerde field of Germany, and accordingly revised its development program in order to cut the cost and time expended at Wietze-Steinfoerde in sinking through the coarse, water bearing overburden and securing a dependable shut-off in the underlying tight clay.

Shaft-sinking might not be difficult where the overburden is dry; but in lowlands, where the water levels are extremely high and the seepages strong, the ordinary freezing-method is costly and slow. Therefore, Gewerkschaft Elverath decided to stand-pipe its shaft, which is 24 feet in diameter, through the 140 feet of coarse and wet overburden at the Haenigsen-Nienhagen field and secure a shut-off without the aid of refrigeration.

Handling 24-Foot Casing

At first it may seem doubtful that it is practical to stand-pipe casing 24 feet in diameter, especially when it is known that the casing is not of steel but concrete. But after the details of this method are considered and comparisons made with the cost and time spent in the method applied in sinking the Wietze-Steinfoerde shaft, it will be found that the job of stand-piping a line of casing 24 feet in diameter was not only practical, efficient, and time-saving, but economical as well.

In order to demonstrate the economical importance of the new sinking-method it will be necessary to give first a brief account of the probable cost and time-consumption of the older method used in sinking through the wet overburden at Wietze-Steinfoerde.

To freeze a pillar of water bearing overburden for the purpose of sinking a shaft 24 feet in diameter and securing a dependable shut-off in the underlying sediments, it is necessary to drill at the outside of the dimensions of the shaft a circle of not less than 27 refrigeration holes of 6 inches diameter to a depth of at least 50 feet below the contact of overburden and water-tight strata.

Costs of the Older Method

In the case of the Wietze-Steinfoerde oil shaft, the water bearing overburden at the location was about 120 feet deep. In consequence, the refrigeration holes had to be brought down to a depth of 170 feet, which, when multiplied by the number of holes required (27), was equal to 3429 linear feet of drill hole. The average stand-piping cost of the wells in the same field was about $5 per foot. Assuming this low figure to be the cost per foot of refrigeration hole, the drilling cost of the circle of holes *alone* would be $17,145; and certainly, the installation of the refrigeration system would add another few thousand dollars to this.

Since 120 feet of each hole, or a total of 2040 feet, had to be driven through coarse gravel and boulders, it may be clear enough that progress through 6-inch casing was at times slow, and that the average price of $5 per foot, as assumed, might be too moderate. Then, time spent adjusting the refrigeration system, and the actual delay period of freezing the ground, was rightfully lost time to the digging of the shaft proper.

Freezing Very Expensive

Although the freezing-method is very dependable and widely used in Europe, it proved itself a very expensive one in sinking oil shafts at the Wietze-Steinfoerde field. Therefore, when the Gewerkschaft Elverath

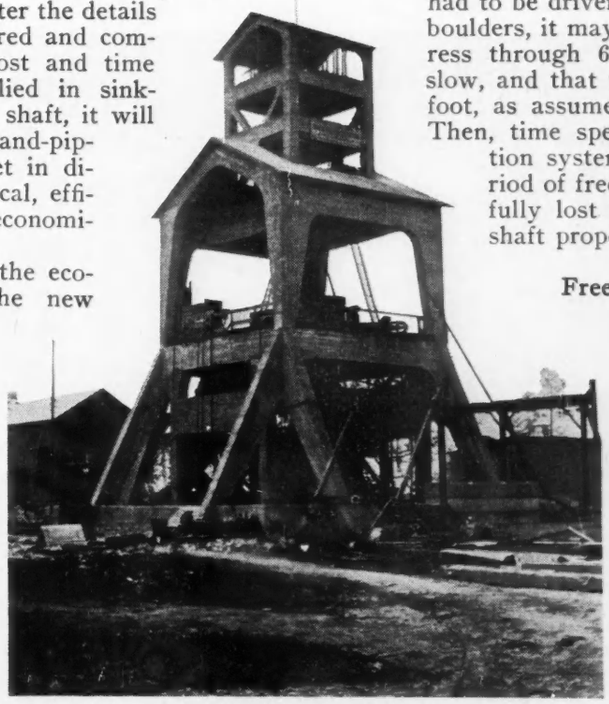


Figure 1—Steel reinforced head frame of an oil shaft of Gewerkschaft Elverath, Hannover, Germany.

made plans for its shaft in the Haenigsen-Nienhagen field, which has the identical geological features of Wietze-Steinfoerde, the idea of standpiping through the wet overburden and securing a dependable shut-off without the aid of refrigeration was worked out.

Stronger Head Frame Used

This huge stand-piping job called for a stronger head frame than the markets at that time offered in the line of ready-to-assemble steel structures. And after considering and comparing the cost of a special built steel head frame to a steel-reinforced concrete structure, it was found that the latter was not only about 25 percent cheaper at first cost, but also would eliminate all future upkeep, such as painting and re-riveting. In addition to this, the weight and strength of the concrete structure seemed best fit for as large a stand-piping job as was to be undertaken. The steel-reinforced concrete head frame of an oil shaft of Gewerkschaft Elverath, Hannover, Germany, is shown in Figure 1.

While the concrete of the head frame was being poured, four men, with the aid of a mixer, attended to the making of the concrete casing, which had to cure and set before being used, in order to withstand the pressure during the sinking process. Considerable time was thus saved, as the casing would be ready for use as soon as the head frame would be completed.

Figure 2—Concrete casing for standpiping an oil shaft through coarse, wet overburden in Haenigsen-Nienhagen.

The casings were poured in take-down forms at a rate of four complete pieces every eight-hour shift. A cheap traveling hand-crane was rigged up to stack the finished casing. Later, during the sinking process, this hand-crane delivered the casing to the workings and set them into place at the shaft collar. Figure 2 shows the concrete casing for stand-piping an oil shaft through coarse, wet overburden in Haenigsen-Nienhagen field.

Drive Shoe Is Cast First

The drive-shoe for this huge stand-piping job was made of reinforced concrete also. Since it was the first piece to be used, it was the first piece cast. The shoe had an inside clearance of 24 feet, was 2½ feet high with a wall-strength of 14 inches. Divided evenly in the circle, 6 grouting nozzles with female

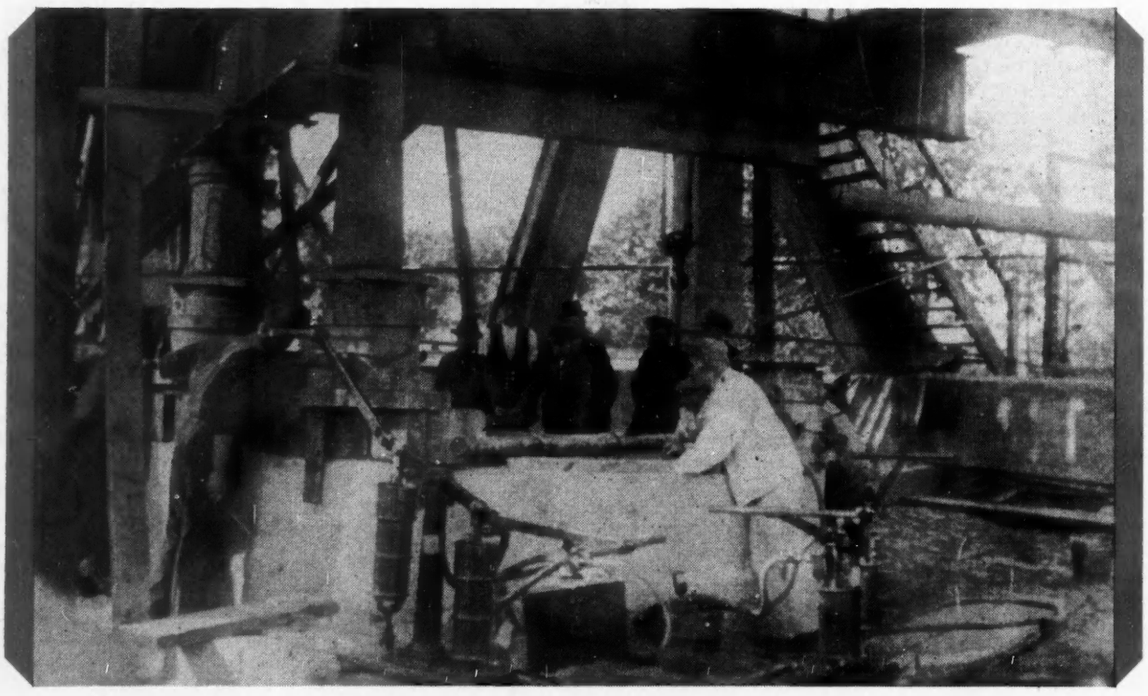
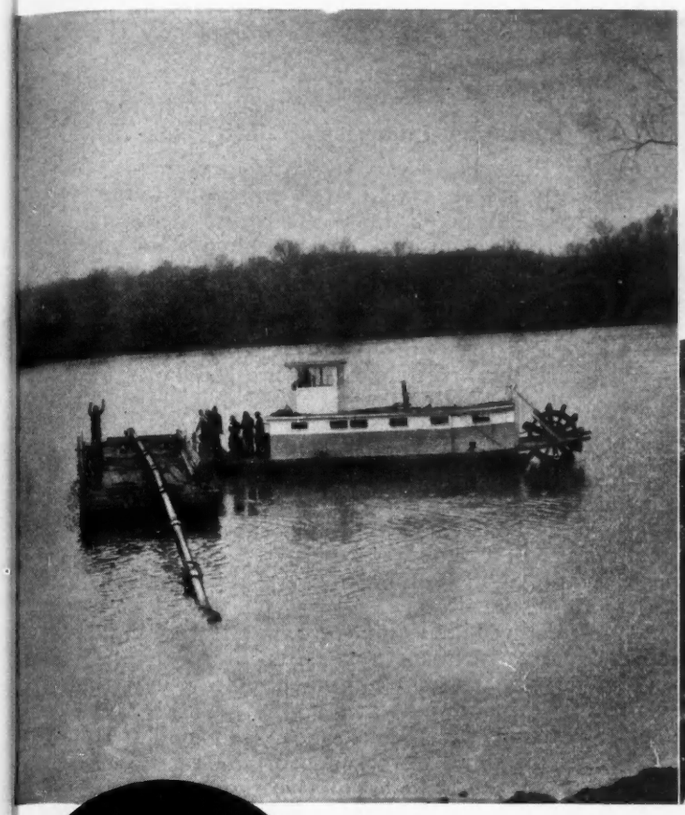


Figure 3—Beam assembly above the collar of the oil shaft. There are two hydraulic jacks in place at left.



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thread for 3-inch pipe connections were built into the wall about 15 inches above the cutting edge of the shoe. The cutting edge, of course, was not very sharp but was rather an imitation of an ordinary casing-shoe cutting edge, slanting from the inside downward and out at 45 degrees.

Casings had the same dimensions in width, height and wall-strength as the shoe, with the exception that the walls were hollow, or double (see illustration), which were to be filled with reinforced concrete as each piece was added to the string at the shaft collar.

Filling the hollow walls served two purposes: joining the casings together with overlapping, interlocking reinforcement rods, and bringing the wall-strength up to the solid 14 inches of the shoe.

By the time the head frame was finished, the casings, or large concrete rings, were cured and set, ready for use. Although the upper part of the head frame was still in forms, the lower part was hardened enough so that the sinking could proceed without risk of any damage to the special provided concrete beams above the shaft collar. These beams were to back the pressure of strong hydraulic jacks that were to force the concrete rings downward.

"Clam Digger" Excavates Shaft Core

Drive-shoe in place, the first ring locked to it and the space between the walls filled with concrete, sinking began. A three-yard double-jawed "clam digger" was used to excavate the core of the shaft. This digger was worked from a speedy friction hoist outside of the headframe. A bin capable of holding a full load of the digger was mounted on wheels running on tracks on the first deck above the shaft collar. This bin was drawn by a small electric hoist from the loading position at the middle of the deck to its dumping position at the rim, where a large chute took care of the muck.

Four hydraulic jacks, each capable of 75,000 pounds pressure, and each operating independently, were placed on the rim of the uppermost ring and backed against strong "I" beams which had been bolted underneath strong concrete beams above the shaft collar. While the core of the shaft was being dug with the mechanical excavator, the pressure applied by the hydraulic jacks forced the casing gently and steadily downward.

Very little time was lost adding new rings to the line. The one-inch steel reinforcement rods, which also locked the rings to each other, being of standard length and shape, with just a hook at each end, made it possible to prepare them ahead. Filling the hollow spaces between the double walls of the casings took only a fraction of time with all hands attending to that. The hydraulic jacks hung in chain blocks, and thus were quickly and easily moved off and on the line of casing. Figure 3 shows the beam assembly above the collar of the oil shaft. Note that there are two hydraulic jacks in place at the left.

Centrifugal Pump Is Installed

After the shaft had been stand-piped some distance below the water level, a large centrifugal pump was installed. This kept the level within the shaft about 10 feet below normal. This practice sped up the sinking considerably, as the incoming water loosened the gravel at the shoe so that at times the casing was five feet ahead of the digger.

In a little less than one month after starting the actual sinking the drive-shoe was pressed into the clay about 140 feet below the surface. Now the work was concentrated on the shut-off. It was intended to pump the shaft dry, connect six lines of three-inch pipe to the six grout nozzles in the shoe, and then force quick-setting cement behind the wall. However, the water level could not be brought lower than 80 feet above the bottom of the shaft. Such a handicap automatically led to the idea to call upon the services of a diver.

Six lines of three-inch pipe were now lowered and connected with a displacement pump of the triplex type, similar to that used for mud circulation in deep well drilling, which was to force the grout behind the shoe. After all preparations had been made, the job of connecting the lower ends of the three-inch pipe lines with the nozzles in the shoe was contracted to a diver for about $120. Figure 4 shows a diver preparing to descend to connect pipe lines with grouting nozzles in the drive-shoe at the oil shaft in Haenigsen-Nienhagen field.

Shut-off Is Water Tight

The job of connecting the pipes below and the actual grouting was accomplished in three eight-hour shifts. Thereafter, the 50 tons of quick-setting cement were given two days to set. After that, when the shaft was pumped dry and inspected, the shut-off proved to be water-tight and dependable. The sinking through the clay was then carried out with air-powered spades, and the walls lined with concrete which was forced behind sliding forms.

As a whole this new sinking-method was a smooth performance. Although no actual facts of the cost of the standpiping job *only* are at hand, it is safe to say that, compared to the Wietze-Steinfoerde expenditures for securing a shut-off, the method just described is by far the cheaper. More than three months of time saved sinking through the overburden in the Haenigsen-Nienhagen oil shaft should be enough proof that this new sinking-method has the advantage over the old one, in coarse, wet overburden.

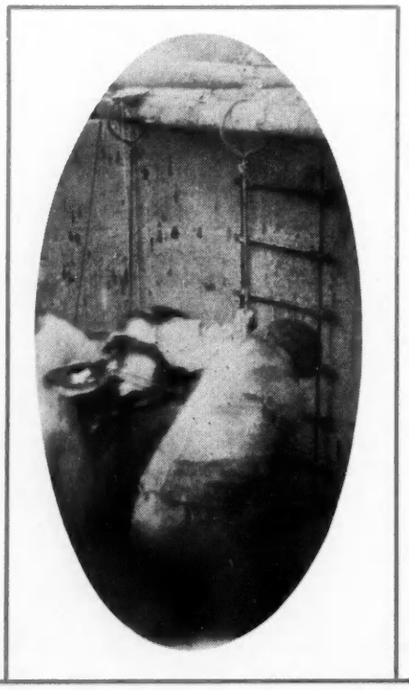

Figure 4—Diver preparing to descend to connect pipes with grouting nozzles in the drive shoe.

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FITTS FIELD DEVELOPMENT

A Composite Scene of Controlled Operations

By FRANK TAYLOR, Staff Writer

PART 2

THE subsurface structure of the Fitts pool is an east-west trending anticline limited on all but the north and east side by normal faults. The fault on the west side strikes north 30 degrees east and dips toward the west. The fault on the south side strikes, roughly, east and west, swinging northward near the northwest corner of Section 33-2n-7e to limit productive possibilities to the southeast. The plane of this fault dips to the south and its trace on successively lower beds moves progressively southward.

The fault is, more accurately, a step fault zone. This is especially true of the structure of the lower beds. Movement in the lower massive limestone beds in places was along several parallel planes. Branching off this major fault, striking generally northeast, are cross faults which die out northeastward. The sands near the major fault clearly indicate the effect of the mechanical action of the fault, showing pinching of strata and decrease of porosity. There are a great number of minor faults along the south edge of the field; some 80 being apparent on aerial survey maps.

The entire pool is enclosed in Franks graben, a triangular feature converging near the west end of production. The effects of the graben formation have been reflected upon the subsurface contour of Fitts, as is indicated by a study of the productive area and its delimitation.

The Boggy formation of the lower Pennsylvanian is the surface of Fitts. The rocks and shales of this formation grade into the McAlester series of sands and shales at depths ranging from 600 to 1,000 feet. There is gas present over a major portion of the pool in the McAlester sands, and some shows of oil have been encountered. The horizon has not been tested for oil production within the limits of the pool, although at other locations in the sector, the sands produce from shallow depths.

Beneath the McAlester is the Atoka series of sands, chief among these being the Gilcrease. A number of lenticular sands have been penetrated in this series, at different sections of the field. It is evident that the Gilcrease is of wide occurrence where deeper production is being obtained. There has not been deserved consideration given the Gilcrease sands as possible oil reserves, in spite of the fact that there is sufficient evidence to make their productivity a matter of importance. Many operators regard tthe Gilcrease sand as an excellent source of gas for field operation, which fact is apparent, but disregard the possibilities of extensive oil production from the same member. At this time there are 3 wells producing oil from the Gilcrease, these being Crosby's Harden 1, 30-2-7e, which has been producing for 3 years and is still flowing its production of about 30 barrels daily; Deeprock Oil Company's Harden 5, 30-2n-7e, is flowing at the rate of 20 barrels daily from the Gilcrease, and Fleetborn Oil Company's Norris 1-A, NE 25-2n-6e, is making 20 barrels daily on the pump. This sand has not been included in lists of productive horizons, although from the performance of the wells where the sand is productive, it must be given consideration in the matter of reserves.

So far, there has been no development of consequence in the Wapanucka horizon. Beneath this series of sands and shales lies the Union Valley formation including the important Cromwell sand. This series is broken over the field, and is not of very regular occurrence. There are three sections in the Cromwell sand that may carry

THIS is Part Two and conclusion of an article which discusses in detail important developments in Oklahoma's currently most interesting field. The first part of the discussion by Mr. Taylor dealt with history of development and operating problems (THE OIL WEEKLY, March 8, 1937, page 21). The accompanying text deals with those problems as related to the peculiar geological conditions which obtain in this area. A previous article (THE OIL WEEKLY, March 1, 1937, page 18) discussed geology of the field as such, while here it is considered more from the standpoint of drilling and production. Taken together, the three articles thoroughly cover the situation at Fitts.

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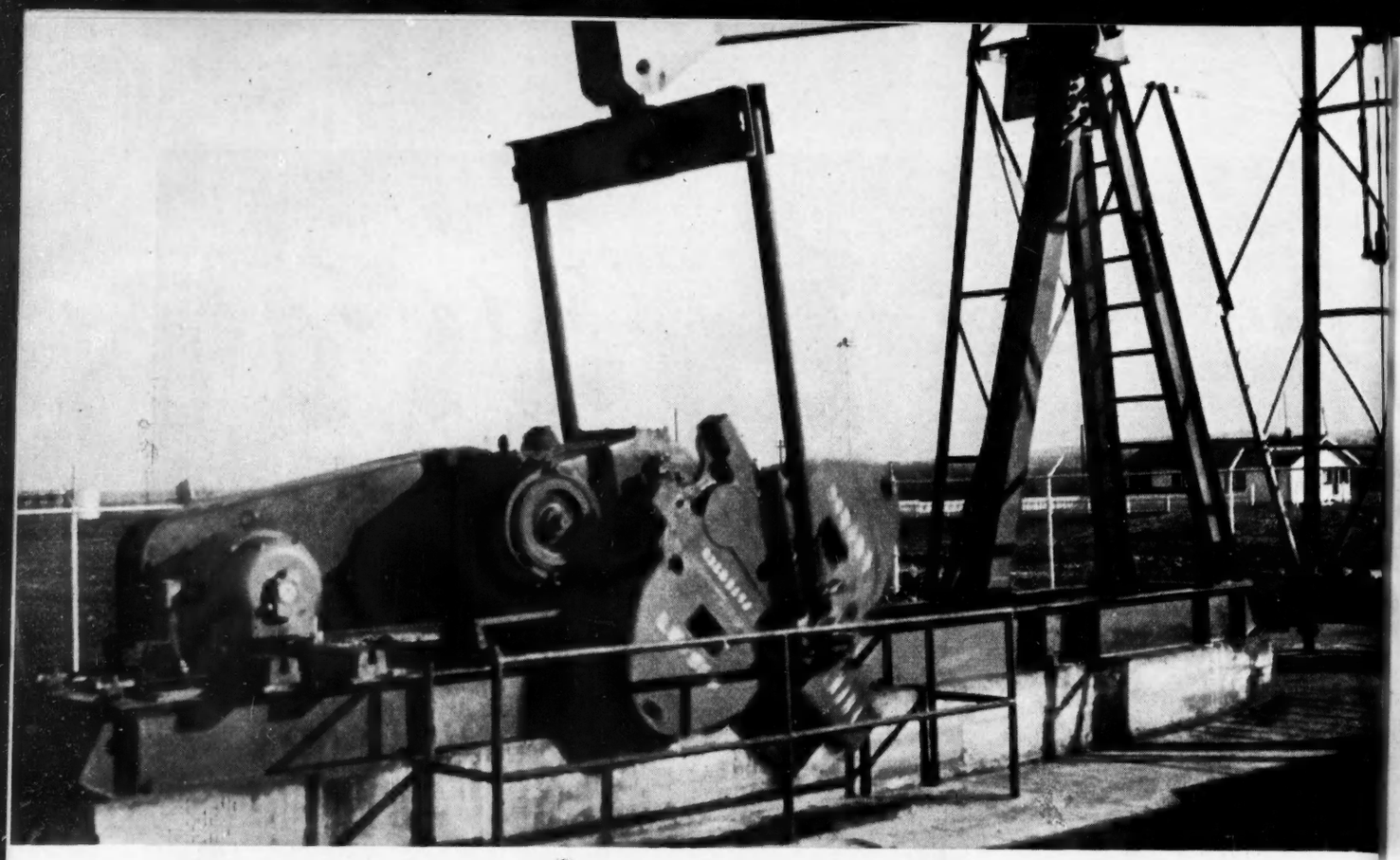

Electrical pumping equipment in operation on E. H. Moore, Inc., B-4 lease, 36-2n-6e, Fitts pool. This unit is set for 21 strokes per minutes, and a stroke length of 6 feet. Each of the units being installed by E. H. Moore, Inc., is being operated from the generating plant of the same firm.

either oil or gas production, or both, or may be absent either in part or entirely. Some wells drilled through the Cromwell to lower production have encountered very good shows of oil in the sands. Tests made by electrical logging devices have shown water in the Cromwell in many northeast locations, and it may be that even where the Cromwell is present in the northeast edge of the field, that it contains water only. Cromwell production may reasonably be expected over one fifth of the field, with the west edge of present production offering best production possibilities. Engineers consider the one fifth Cromwell coverage of Fitts a conservative estimation, pointing out the scattered locations in which it has been logged. Large gas wells have been drilled into the Cromwell, which is supplying the major output of the 24 gas wells being used for field development. One oil well is being produced from the Cromwell.

The Caney section of the lower Pennsylvanian and upper Mississippian is non-productive. The Woodford shale is immediately above the Hunton group, and is unconformative. The variable thickness of the Woodford has been the determining factor in a number of wells of the area, and is of vital importance in high or low checking in any outpoust where it might thicken to the extreme or be almost absent.

The Hunton production is coming from 4 strata within the series, each stratum being variable as to occurrence and distribution as well as production. In general, the Hunton may be expected to produce over more than one half of the pool's area, or over the entire "high." Hunton production along the east side of the pool will vary from that along the west side, where the oil is more evenly distributed throughout the Bois'd Arc section. The east side of the pool shows the Hunton to be highly prolific from the oolitic, or basal, stratum, and that the Bois'd Arc thickens to 180 feet in certain wells. Of this 160-180 feet, as much as 90 feet has been found saturated.

The belief is prevalent that the Hunton along the east edge of the field will develop the most prolific production of the pool. There is water along the edge, as has been indicated by deep tests, but it is not considered as being dangerous to production. The Hunton formation is generally of uniform texture from one location to another, and shows an unusually high porosity along the east edge of Fitts pool. This is the first instance where Hunton lime has shown such a productive capacity, and consequently is being given a higher rating as constituting a major oil reservoir of Southern Oklahoma.

The Ordovician section includes 4 major productive strata, and these could be subdivided into 7 individual productive stratum. The Viola limestone, both Bromides and the two Wilcox sands as well as the upper McLish are all productive at depths varying from 3800 to 4600 feet. Beneath the Wilcox is the Oil Creek sand, which is the lowest producing member of the field's geologic column.

Production from the Viola formation is from the lower section, or the Trenton. This stratum is about 240 feet thick but is not entirely saturated. At some locations the Viola is without sufficient porosity to allow migration of either oil or gas, although most of the field will produce from this horizon. The Bromide section contains 2 sands of approximately 20 and 30 feet in thickness. These sand zones are widely distributed throughout the field and will account for a large share of production. The McLish series is divided into three sections, this including the upper McLish, a sand, and the Wilcox lime and the Wilcox sand. The upper McLish averages about 250 feet in thickness, and the Wilcox sand about 120 feet in thickness. Neither of these horizons will produce over the entire field. Water has been indicated in tests along the present boundaries

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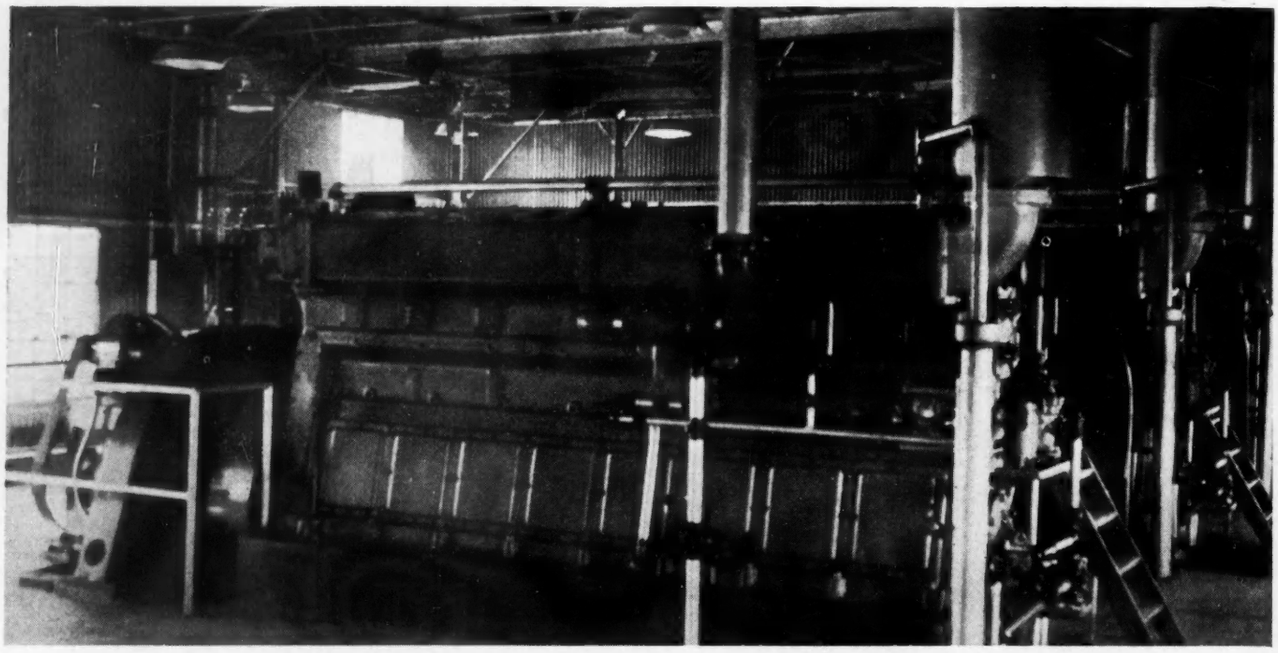

One of the three Diesel units installed in connection with the electric power system leading to pumping rigs on E. H. Moore, Inc., leases. Each of the units is 400 horsepower, converted to natural gas as fuel; the plant being rated at 750 kilowatts.

of Wilcox sand production, and it is doubtful if more than 5 or 6 more Wilcox producers are possible. There are at present 29 wells producing from the Wilcox, with a few making a little water. The Wilcox in Fitts is highly porous but is not as loose as in more northern locations. This is not so much a function of lessened porosity as it is of more thorough binding of the sand particles. Where high enough to be free of water, the Wilcox sand is highly productive and per acre will produce a considerable share of the production.

The last sand to be proven productive, the Oil Creek, occurs about 160 feet below the Wilcox. There is only one well producing from this horizon at this time and indications are that the sand is restricted to a very small section of the field. There is little expectation that later developments will prove this horizon as a major productive strata.

There have been a few tests drilled through the top of the Arbuckle limestone to check to possibilities of production from this horizon. Only slight shows were encountered and it is generally admitted that there is little chance of finding commercial production from this lower pay. The Arbuckle is believed to be between 6,000 and 8,000 feet in thickness and to cover the granite. No test has proven this as yet, but the evidence gained through wells drilled at other southern Oklahoma locations would tend to support this theory.

Classification and Proration

The multiplicity of productive horizons in Fitts pool made it necessary to group some of the strata under general designations, these groups being considered as common sources of supply so far as proration and production is concerned. For this purpose, the Viola, Bromide and upper McLish have been classified as "Upper Simpson", or merely Simpson, the Wilcox is classified individually as a source of supply, and the Hunton group is a third proratable section. Previous to the redesignation of Hunton, it had been considered a class "D" horizon, with a flat allowable of 100 barrels per well daily. Effective February 1, 1937, Hunton is a class "C" horizon with a minimum allowable of 75 barrels per day. Oil Creek, Cromwell and Gilcrease wells are not considered on proration.

All potentials in the field, with pumping wells excepted, are taken through 2½-inch tubing or based upon 2½-inch tubing delivery. A 6-hour potential is obtained on Simpson wells, the last 4 hours being multiplied by six to obtain the 24-hour potential. Hunton potentials are based upon a 4-hour test, the last 3 hours being multiplied by 8 to equal the daily test. Bottom hole pressures are obtained prior to taking potential tests, and careful data on bottom hole pressures have been kept by the field operators. Potentials are not taken after acid treatment until the well has been allowed to rest idle for 24 hours after flowing out acid and load.

Although the field is considered flush production, the inconsistencies of pressures and sand edge has resulted in 38 wells being placed on the pump. This figure includes one Gilcrease well, 32 Simpson wells and 5 Hunton lime wells. There are no Wilcox sand wells being pumped. Also in respect to Wilcox sand, there is a possibility that it can advantageously be repressured, or that the rate of decline of bottom hole pressures can be substantially reduced through the injection of pressured gas into this reservoir. Tests have been made to lend evidence for work along this line, although no actual injection has been begun.

Firms holding production in Fitts pool are unanimous in stating that the pool is highly modern in its regulation, productive control and development. It has served as a laboratory for experiments in determining the possibilities of using some means of potential taking other than either tubing or casing flow. The United States Bureau of Mines made a 70-day examination of well characteristics, and although the results did not lead to the adaption of a particular potential method, the results are impor-

MANUFACTURING EXPERIENCE versus CORING Experience

There is a vast difference between manufacturing for sale and manufacturing for use. Manufacture for sale, without the actual experience of usage back of it, too frequently is nothing more than a production problem. Manufacture for use on a highly competitive basis, however, entails many important characteristics from a strictly business standpoint. In core drilling service, for example, it involves correct design; simple, efficient operation; economical manufacture, operation and maintenance; and efficient, dependable performance. In such a coring service as Elliott has conducted for more than fifteen years, these are not merely desirable features of a tool—they are imperative to business life.

Elliott always has been essentially a coring service organization, conducting a coring service to oil companies on a strictly competitive basis; and intensively specializing on the development and perfection of coring equipment, coring practice, and coring results as a matter of necessity. The world's finest coring equipment is a natural, inevitable result of this manufacture for use procedure.

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Write for Bulletin No. 36-R illustrating and describing the Elliott Model "A" Combination Core Drill for rotary drilling.

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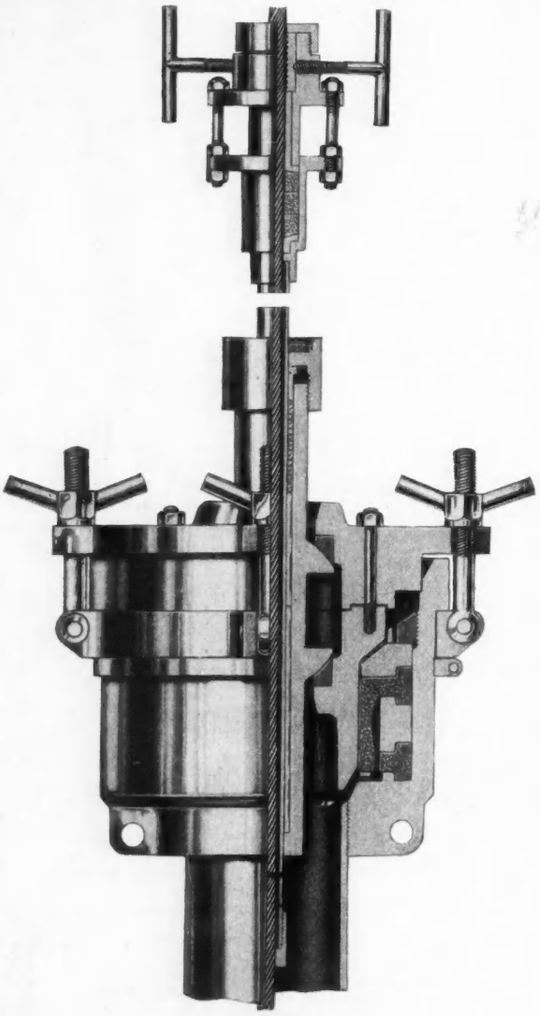

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Before the advent of the Kerotest High Pressure Oil Saver, fortunes in oil and gas were wasted during cable tool operations. By effectively imprisoning gas and oil forced up under high pressure and thus permitting the continuance of drilling to the desired depth, the Kerotest Oil Saver has proved a veritable boon to modern drilling operations.

It has been tried, tested and proved to be dependable under all pressure conditions with cable tool drilling and affords ample safety to the drilling crew.

In addition, the Kerotest Oil Saver saves wire line from wear . . . maintains alignment . . . effects shut-off and retains balanced pressure on well while drilling—all in all an indispensable tool for modern drilling. Descriptive folder on request.

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tant in future studies. At the present time the Simpson is on a 3 percent decline curve while the problem is being attacked by a committee of engineers representing all companies within the field.

Valuable statistics have been obtained on pressure drop, reservoir energy loss and accumulative production, nearly from the beginning of the field. These figures and pressures obtained on key wells at regular intervals are being used to correlate the field's production with economy and greatest ultimate yield.

During the early stage of Fitts development, L. M. Diffendaffer and Ira E. Dugan were stationed in Ada by the Oklahoma Corporation Commission in charge of proration. Since that time, Diffendaffer has been transferred to Oklahoma City, and Hugh Thomas was sent to Ada during October of 1935. At this time, Ira E. Dugan is conservation officer in charge of Fitts and Jesse pools, and Hugh F. Thomas is serving as deputy. Offices are maintained in Ada.

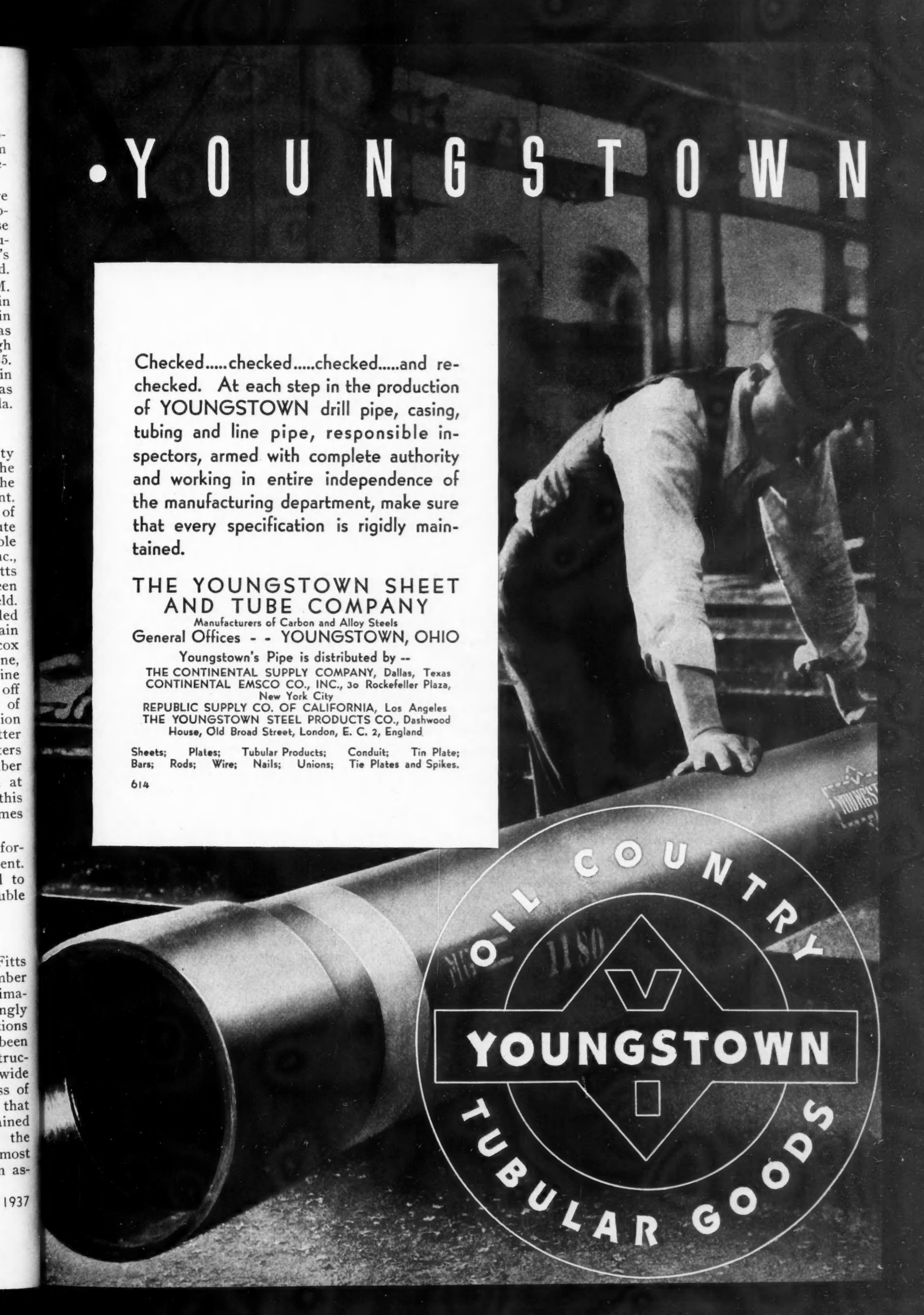
Production Difficulties

Up to this time there has been very little difficulty experienced with salt water disposal. However, the problem is due to assume greater importance as the wells are showing slightly greater water content. This is entirely expected, and the consideration of the matter at this time is to forestall a last minute rush to prepare for water disposition. A possible solution now being considered by E. H. Moore, Inc., is the returning of brine into sands north of Fitts pool about 4 miles, where the Hunton has been drilled at 350 feet, 3,150 feet higher than in the field. Tests have been made of the lower horizons drilled by this well, Waite 1, and although they now contain sulphur water, there is a possibility that the Wilcox can be used as a disposal medium. If this is done, there will be no danger of the return of the brine to production within the pool, as a fault cuts off the strata between the well and the north edge of production. It is inevitable that brine production must become an important problem during the latter stages of the life of the field. Some small treaters have been installed, and there are plans for a number of more extensive plants. Most of the disposal at this time is by means of evaporation in pits, this being adequate only because of the minor volumes being produced.

A few wells have given difficulty through the formation of paraffin in tubing or pumping equipment. The high paraffin content of the oil may lead to production difficulties, although the little trouble that has so far occured is of slight moment.

Reserves

The problem of calculating the reserves of Fitts pool has been previously considered by a number of unrelated organizations and individuals. Estimations have been exceedingly high and exceedingly low. Some effort has been made to base calculations upon saturation, and other estimations have been based solely upon sand coverage per acre of structure. One estimation of reserves that gained wide publicity was based upon the per foot thickness of each productive member of the pool, the fact that only a small percentage of each section contained oil saturation being entirely disregarded, and the result was far above an acceptable figure. Of most of the calculations that were basically sound in as-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In the oil fields— there are many times when equipment is subjected to terrific shocks . . . when power pressures test their capacities, often a fatal spot for clutches less rugged than Dodge Diamond "D" . . . Dodge Clutches are designed for normal or severe conditions . . . They are compact . . . rated to allow for 100% overload . . . have large friction areas . . . are completely enclosed insuring safety to workmen and full protection against dust and dirt.

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sumptions, most have necessarily been revised upward with finding of greater production than expected along the east edge of the pool. Some figures do not include any estimation of possible recovery from shallow sands, and consequently may be a little low. Until the first of this year, the development of the field as a whole had not been defining either as to sources or extents of production.

Authoritative sources are still widely divergent upon individual aspects of the reserve problem, although massed calculations are in closer agreement than at any time since the discovery of the pool. Irregularities of strata thickness, saturation, porosity, occurrence within the structural limits, and the incomplete knowledge of the extent of production in more shallow horizons, is all conducive to error in reserve calculation. Some sections have not been produced sufficiently to indicate more than their original status.

In all, the problem is a complex one, with a number of assumptions necessary to a total of relative accuracy. Discounting the unexpected in the matter of further unindicated extensions or increased saturation in strata now producing, and correlating the evidence of the various strata to past production, it is possible to arrive at figures that can be checked closely by the customary methods of calculation. In order to arrive at this figure, it is necessary to consider each section of each horizon individually, or as a separate stratum, and to calculate the reserve and extent of these members rather than the reserve and extent of the sections as a whole. For this purpose, the horizons are segregated into 11 strata, each of which is considered as unassociated with another productive horizon.

The most shallow productive member of the pool that has shown possibilities of extensive reserves, as has been indicated through past production, is the Gilcrease sand of the Atoka series. Although there is incomplete knowledge of the extent and uniformity of this sand, it is known to be prevalent over a considerable portion of the field, and to carry gas and oil in appreciable volumes. Concluding that the sand is to be found over an area 10 percent greater than it has been logged in drilling, a basis which is highly conservative in view of the very slight testing of this horizon, it may be reasoned as being productive over a total area of 1,914 acres, or a little more than ⅜ percent. Recovery over this area should be about 3,300 barrels per acre, both on the basis of saturation and past productive capacity of the 3 wells into this horizon. This places a reserve figure of 6,316,200 barrels on the Gilcrease.

It is recognized that the Cromwell may become a highly important productive stratum; but it is also admitted that it is spotted over the field, that it may contain large volumes of water, and that it is nearly absent in scattered locations. Where it has been cut and given a partial test, it has shown highly varied results, although the tests have been generally encouraging.

Where the Cromwell is found, and saturation is present in either one or all three of the sand sections, the average expected production per acre is 8,000 barrels. Using this as the acre factor and concluding from present knowledge that the probable extent of the Cromwell production will not be less than 1700 acres, then the total reserve of this horizon is 13,600,000 barrels.

The next formation in order of depth is the Bois 'd

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UNION
PETRO
Steel-to-Steel Seats
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HANDLE BAR
Steel-To Steel Seats
Brass-To Brass Seats
3/8" to 4"
Use a hammer instead of wrench to loosen or tighten nut.
Banish Friction Hazard with
YOUNGSTOWN'S Forged STEEL UNIONS
Lasting Udilyted cadmium treatment is your permanent safeguard against sparks, rust or galling in these durable unions.
Machined to precision . . . built with extra heavy ends and nuts . . . permanently lubricated nut-threads to insure tie-ups in a jiffy and repeated use . . . these stalwart unions stand out boldly in their line.
The Handle Bar Union, particularly, has proved its adaptability and facility of use and service on loading racks and on drilling rig stand pipes and steam pipes. With a maximum of safety at a minimum cost, the superior advantages afforded by YOUNGSTOWN FORGED STEEL UNIONS earn the highest esteem of oil men everywhere.
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Arc of the Hunton series in the Devonian group. This stratum will produce from more than one-half the total area of the field, and although over much of the area it is not more than 20 feet in thickness, it may be the most prolific of all horizons in the east edge of Fitts. At this sector the saturation is 90 feet of a stratum thickness of about 160 feet. Estimates of production where the saturation is greatest have been as high as 65,000 barrels per acre. Two other members of the Hunton, mainly the oolitic, will be comparatively uniform in production over the field. A total productive area of 4,000 acres being considered for the Hunton, and with average reserve of 14,500 barrels, then the total reserve in this group is 58,000,000 barrels. Accumulative production to the first of the year from the Hunton group is only 1,597,699 barrels, and the Hunton may be considered a 1936 development. Gravity of Hunton oil averages 39 to 40 degrees.

Viola lime production probably will result in a greater uniformity of recovery than any other of the productive strata. It occurs widely over the greater portion of the field, and is fairly reliable. Production is probable from 3,100 acres, the average recovery being calculated at not less than 8,700 barrels per acre. This allots a reserve of 26,970,000 barrels to the Viola.

The Bromide section, containing 2 separate sands producing from a large area of the field, will provide about 14,000 barrels per acre over 2,380 acres. This allows a total reserve of 33,320,000 barrels to this formation. The upper McLish, including the first two productive sands of the series, will produce about 27,000 barrels per acre, but the extent of the production will be limited to about 2,200 acres. This gives the McLish about 59,400,000 barrels. To the first of the year the accumulative production for this group, which is designated as the Simpson, an individual source of supply including the Viola, Bromide and McLish, was 24,264,170 barrels of 38 to 39 gravity oil.

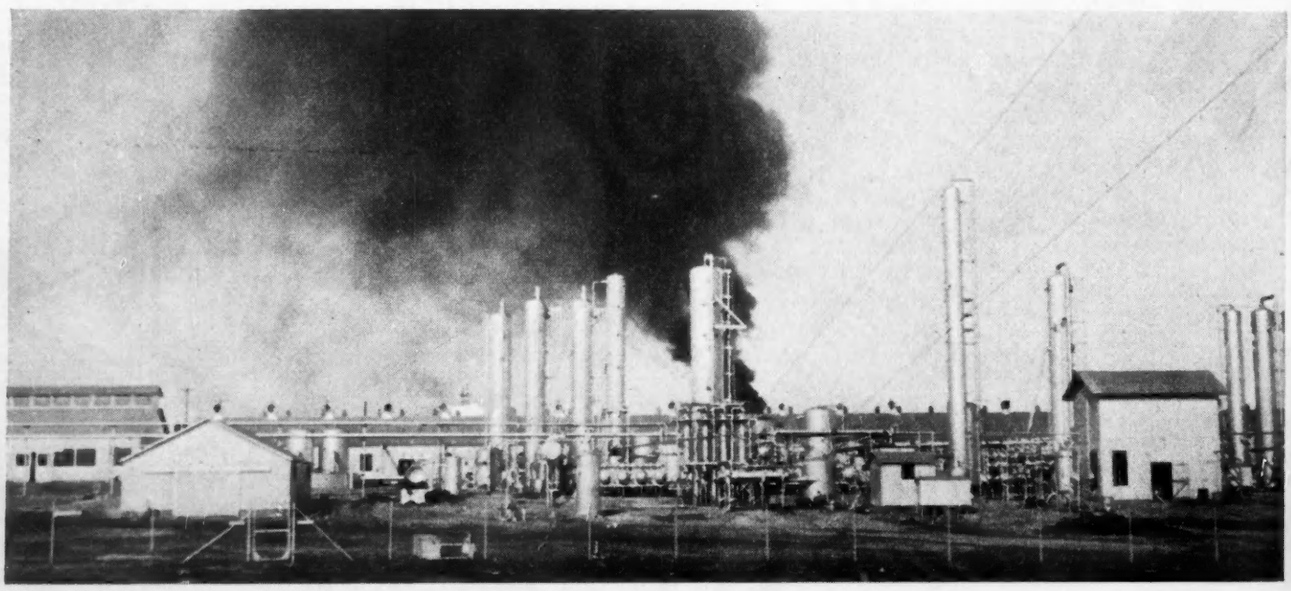
The Wilcox sand has produced to the first of the year 858,219 barrels from 28 wells. Gravity of the crude from this horizon averages 39.6 degrees. Ultimate production from this horizon will be high, but will be limited by watered edge strata. Estimates of the per-acre reserve have been conservatively placed at 51,000 barrels per acre. Only about 300 acres can be considered productive from the Wilcox, so although the per-acre yield may be high, the total reserve attributed to this stratum should not be placed above a total of 15,300,000 barrels.

The Oil Creek formation is only producing from one well at this time, although there is another test nearing the horizon. It seems evident from the knowledge gained in other wells of the field, that the Oil Creek sand is more limited in area than is the previously considered Wilcox. Indications of the productive capacity of the Oil Creek sand, based upon the one producer, would place an estimate of reserve at about 18,000 barrels per acre. There is little evidence to accurately limit the area covered by the productive section of the horizon, but it should not exceed one fourth the Wilcox in extent. This allows the Oil Creek a total reserve of 1,440,000 barrels.

Assuming that the factors taken for these calculations have been reasonable and in line with present knowledge of field conditions, and that they have been properly applied, they express a reserve for Fitts pool of 214,346,200 barrels of crude. This statement is referable to a number of sources, and is a composite of opinion rather than the result of a single detailed observation.

The question of adequate development and conservation toward the end that the greatest ultimate production will be obtained, has not and is not likely to become a problem. Of the total number of wells now drilled and producing, E. H. Moore, Inc., owns 26 percent, Magnolia Petroleum Company 19 percent, and Carter Oil Company 10 percent. The balance of producing wells is divided among 21 other operators, none of which has more than 5 percent as an individual operator.

Carter Oil Company operates the largest natural gasoline plant in Fitts pool. Two units recently installed at this plant increase the number of compressors to 21. The plant is constructed according to modern plan, and is capable of handling about 65,000,000 cubic feet daily. Much of the gas passing through this plant is returned to other plants for repressuring and pressure drilling control.



ASK THE CEMENTERS

ON SOUTHERN MINERALS BLISS No. 6

ON Southern Minerals' Bliss No. 6, Clarkwood, Texas—oil string, 4800 ft. of 7" casing, 9⅝" hole—the Superintendent ran slurries up to 15.4 lbs. 'Incor' gave him exactly what he needed—for 'Incor' pumps readily at 15 or 16 lbs., assuring a stronger, denser, longer-life shut-off.

Even at 16 lbs., 'Incor' is free-flowing, velvet-smooth—and it stays gel-like to keep out mud. For 'Incor' is specially made to do just that.

And controlled setting time, built into the cement itself, allows plenty of leeway when delays occur while running cement into place. Dependable high early strength permits drilling out in 1 to 2 days.

Two Oil-Well Cements

'Starcor,' too, has these needed special properties, only it is 'timed' for use in deep, hot holes. And 'Starcor' is also specially processed for use where sulphate waters tend to destroy the action of ordinary cement.

Use 'Incor'* or 'Starcor'* next time, depending on the job. You'll find it pays—and pays well. Made and sold by Lone Star Cement Corporation, Dallas—Houston.

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TWO PORTLAND CEMENTS—BOTH MADE FOR OIL WELLS

Properties	'Incor'	'Starcor'
Greater pumpability	Free pumping at 15 to 16 lbs.	
Gel-like body	Reduces mud contamination; doesn't settle out	
Controlled setting time	Normal UNDER 140°	Normal OVER 140°
High early strength	Drill out 1 to 2 days	Drill out 2 to 3 days
Sulphate-water resistance	Good	Exceptional sulphate resistance

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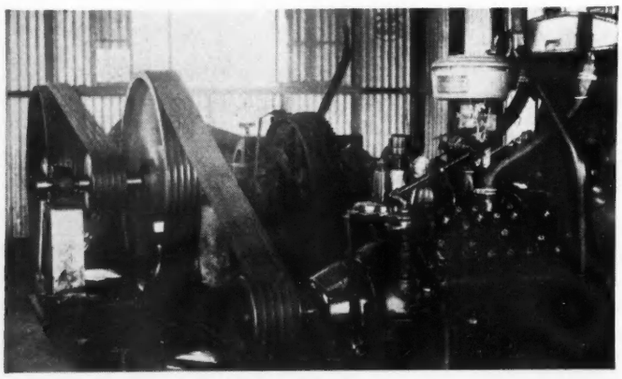
Makers of LONE STAR CEMENT • 'INCOR' 24-HOUR CEMENT • 'STARCOR' CEMENT

Central Power

IS ECONOMIC CONSTRUCTION ON SMALL LEASE PRODUCING FROM SHALLOW PAY

A CENTRAL power combining the advantages of a number of units has been placed in operation in the Airport pool of Tulsa County, Oklahoma, eight miles east of Tulsa. C. M. Young is the designer, the completed assembly being housed on a lease owned by Young and associates. Two wells are being pumped at this time from the Bartlesville sand at approximately 1,000 feet in the newly opened pool.

The prime mover of the assembly is an eight-cylinder, "V" type automobile motor, adapted to the service. Natural gas is being used as fuel, the pressure being controlled by two regulators. Volume is adjusted through an indicating valve. As the power unit is installed within a building, the stock radiator has been removed and a larger capacity radiator has been connected that has given entire success to date. The motor transmission has been removed and in its place a simple clutch installed. Motor wiring has been retained, with battery connection and carrier, and beside furnishing ignition, the battery supplies two horizontal, swivel-mounted auto lights within the structure housing the equipment.



Engine at right drives power through reduction shaft as part of winch; the latter being also used in pulling jobs at the wells of the lease. Lease power is driven by large pulley near rear of building.

The motor clutch, battery, large radiator, exhaust piping and associated parts of the power unit are each connected to the engine by means of brackets or hangers. The entire unit is mounted on heavy, crossed, angle-iron braces, and occupies one end of the power house.

A salvaged winch has been installed next to the motor power. This unit serves a duel purpose. During ordinary operation the only part played by the winch in the assemblage is that of power reducer between the engine and the pumping power. The jackshaft rotates freely during routine pumping and carries a large and small pulley transmitting power from the engine.

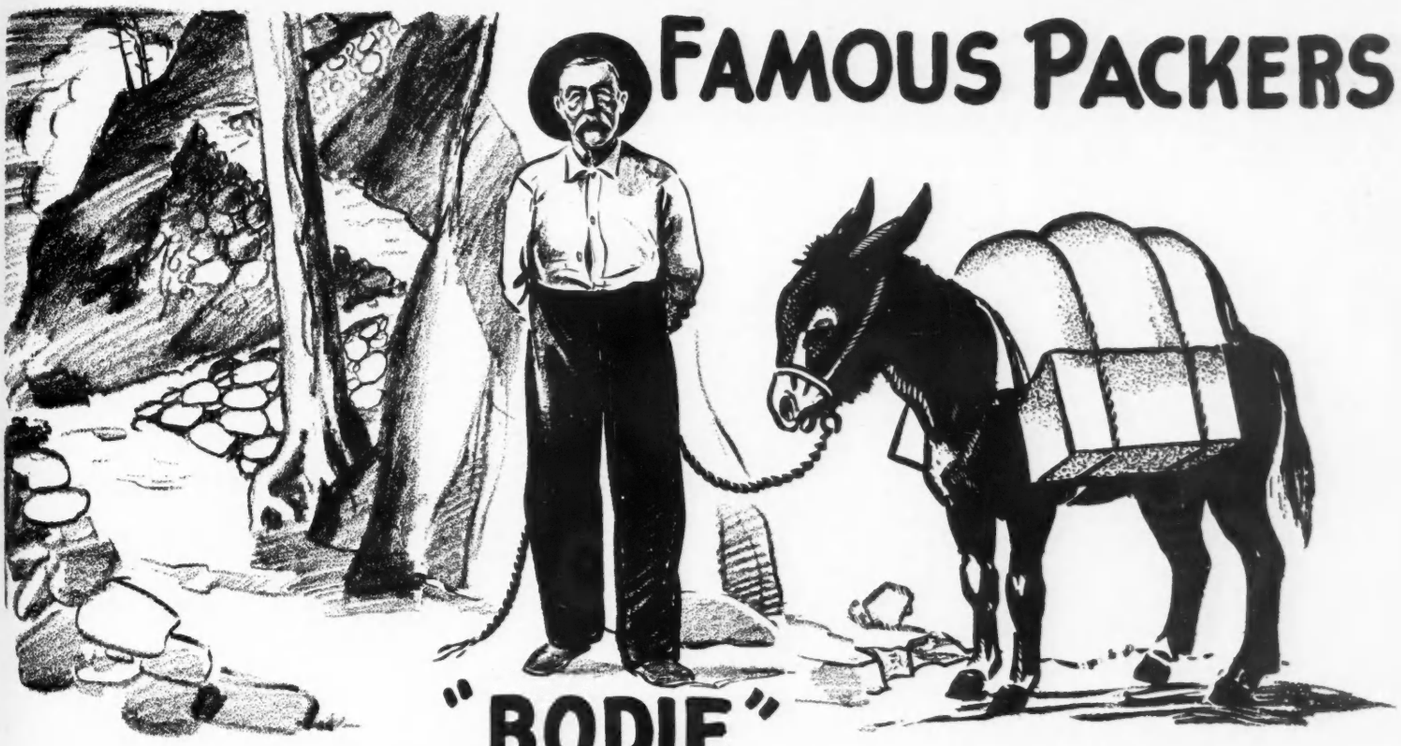
The second service to which the winch can be put is that of pulling machine for the wells being pumped. By disengaging the power through the clutch at the motor, the operator can make the change in less than one minute. The jackshaft carries a sliding cog that engages with the reversible winch clutch. To set in position for pulling, the cog is engaged and locked into place with a set screw. The winch is so placed in the power house that the operator can view either well without changing his position at the controls of the winch. A ⅜-inch drum line parallels the pull rods to one of the wells, the line being reversed when work is to be done on the opposite location. Each well is equipped with a mast, each of which is divided into an "A" frame at a point just above the pump jacks. Each mast is equipped with traveling block for tubing, casing or rod jobs. By this equipment it is possible to decrease the time required for a pulling job to a minimum. There is no necessity to wait for a pulling machine to be moved over the well and rigged up. The operator can make the change in his equipment whenever necessary, starting the job of pulling within a few minutes of the time trouble developed. This feature is important in decreasing cost of pulling jobs, but also it allows production to be resumed at an earlier moment, an important economic factor in shallow production areas.

The power and safety guards complete the equipment within the power house. The power end is set in the concrete floor, the bases of the other major pieces of equipment being adjustable to gain correct belt tension or placement. Power transmission from one piece to another is by five "V" type belts over pulleys.

The most important consideration in making the installation is to obtain the correct pulley ratio. The ultimate delivery will be in strokes per minute delivered to the pump jacks, this equalling the rotation of the power. In the particular case of the unit described, the motor turns over at an average speed of 1500 revolutions per minute; which is equivalent to a road speed of 27 miles per hour. The 1500 revolutions is lowered to 392 on the rotating shaft of the winch, and to 90 revolutions on the power. This was calculated to produce a pumping speed of about 17 strokes per minute, the actual counted strokes per minute being 16.7.

Everything considered, the installation of the equipment was not difficult or accompanied by unusual expense. The operators have found the machinery smooth in operation, effective in each of the requirements to which it has been put, and economic in initial cost and in operation.

FAMOUS PACKERS



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For 50 years the late "Bodie" packed the animals for long trips over dangerous trails, without a loss of animal or pack. The unknown interior of our great Yosemite National Park was surveyed and made accessible because "Bodie" controlled the packing of the Government's scientific equipment and supplies.

GUIBERSON PACKERS

today are famous for correctly and perfectly controlling the valuable oil and gas in wells. The unknown interior of our greatest natural resource has been controlled, surveyed and made accessible through the use of GUIBERSON Packers. Dangerous oil wells at great depths have been conquered and controlled without a single loss of a barrel of oil.

Type "C" Control Head Hook Wall Type Tubing Packer with Long Single Rubber Packing Medium

Type "G" Control Head Hook Wall Type Tubing Packer with Multiple Short Rubber Packing Medium

Type "GT" Control Head Hook Wall Type Tubing Packer with Multiple Short Rubber Packing Medium and Long Valve Lift

Type "GL" Control Head Tubing Liner Packer with Multiple Packing Medium

Type "F" Hook Wall Packer with or without Bleeder Valve and with One Rubber Packing Medium

Spiral Tubing Packer to Pack off Bottom Hole Water in formation or in Casing

Spiral Casing Packer to Pack off in Bottom Hole Water in formation or in Casing

Spiral Bottom Hole Plug to Plug back or shut off Bottom Hole Water in formation or in Casing

The complete GUIBERSON line of patented Control Head and Spiral Packers, and Bottom Hole Plugs has reduced to an exact and perfected science the process of packing oil wells. Every oil well packing requirement is met by a particular type of GUIBERSON Packer. The above packers are unique in offering the five essentials in packing an oil well: (1) All GUIBERSON Packers pack tight; (2) All GUIBERSON Packers will hold indefinitely; (3) All GUIBERSON Packers pack at any required depth; (4) GUIBERSON Control Head Packers will run in against high gas and heavy fluid pressure; (5) GUIBERSON Control Head Packers enable operator to have complete control at all times— he can set, reset higher or lower, open or close passage and remove packer at any time without damage to well or to packer.

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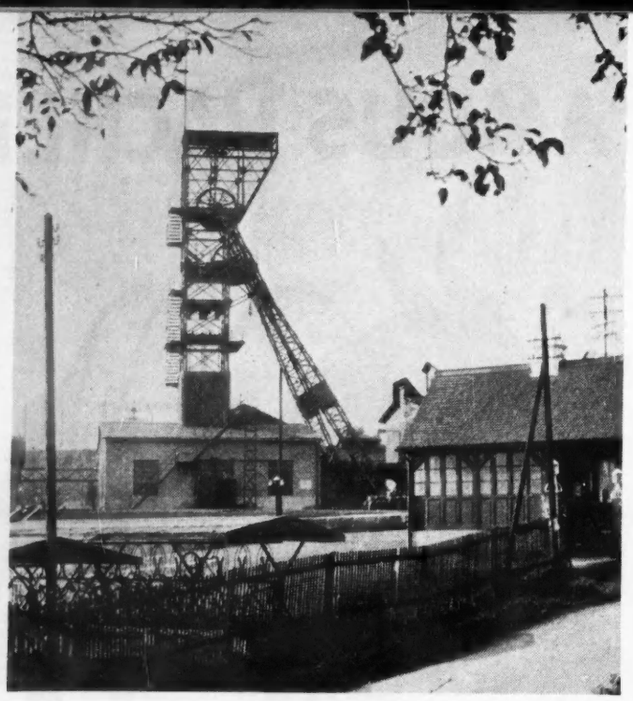


STRAIGHT AND REVERSE CIRCULATION USED IN PECHELBRONN, FRANCE

Methods for Developing Production from Lenses

By I. HONTCHARENKO,
Pechelbronn Oil Company

PECHELBRONN oil basin in France lies in the Tertiary (Oligocene) and secondary (Jurassic, Keuper) formations of the Rhine Valley which consist, in the area of Merkwiller-Pechelbronn, of more than 1000 meters of marls and sands.

A great fault, the Rhenish fault, running from north-northeast to south-southwest, with a throw of more than 2000 meters, separates the basin from the Triassic sandstone of the Vosges. This fault determines the limits of Pechelbronn's productive horizons towards the west.

Extent of Pechelbronn

The extent of the Pechelbronn concession is more than 40,000 hectares; its length, which runs from Wissembourg on the German border to Brumath, close to Strasbourg, is approximately 35 kilometers. Pechelbronn's width is about 15 kilometers. Pechelbronn represents a countryside of slightly valleyed hills, the tops of which are thickly covered with loess.

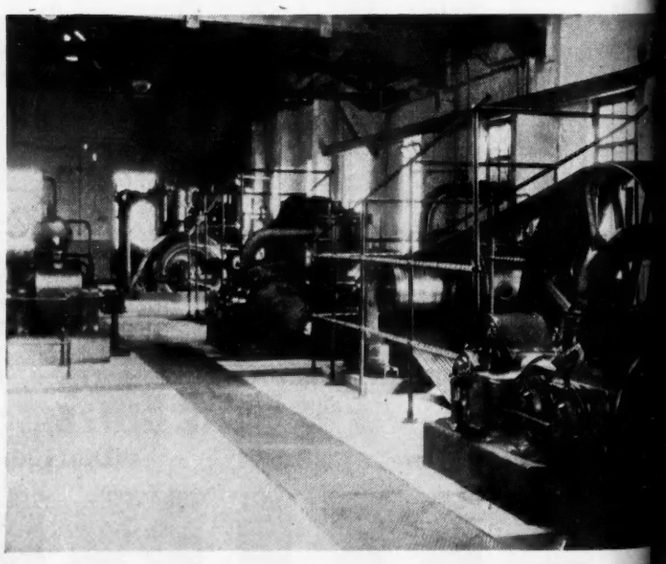
Pechelbronn oil basin presents specific geological conditions for the development of crude oil production. It has many sand layers or lentils included among the waterproof marls covering areas ranging frome some square meters to some hectares.

As delineated on the surface by productive wells, the forms, or shapes, or sizes of the productive spots are anything but regular. It is a typical "shoestring" pool, rendering completion of each individual well an individual problem for the operator.

The field is characterized by fault compartments which may be found to be thrown up or down and to be extending generally more or less parallel to the great Rhenish fault.

Where Activity Is Centered

By glancing at the outline of the Pechelbronn concession, it is ascertained that the principal oil pools are in the vicinity of Lobsann, Lampertsloch, and Merk-



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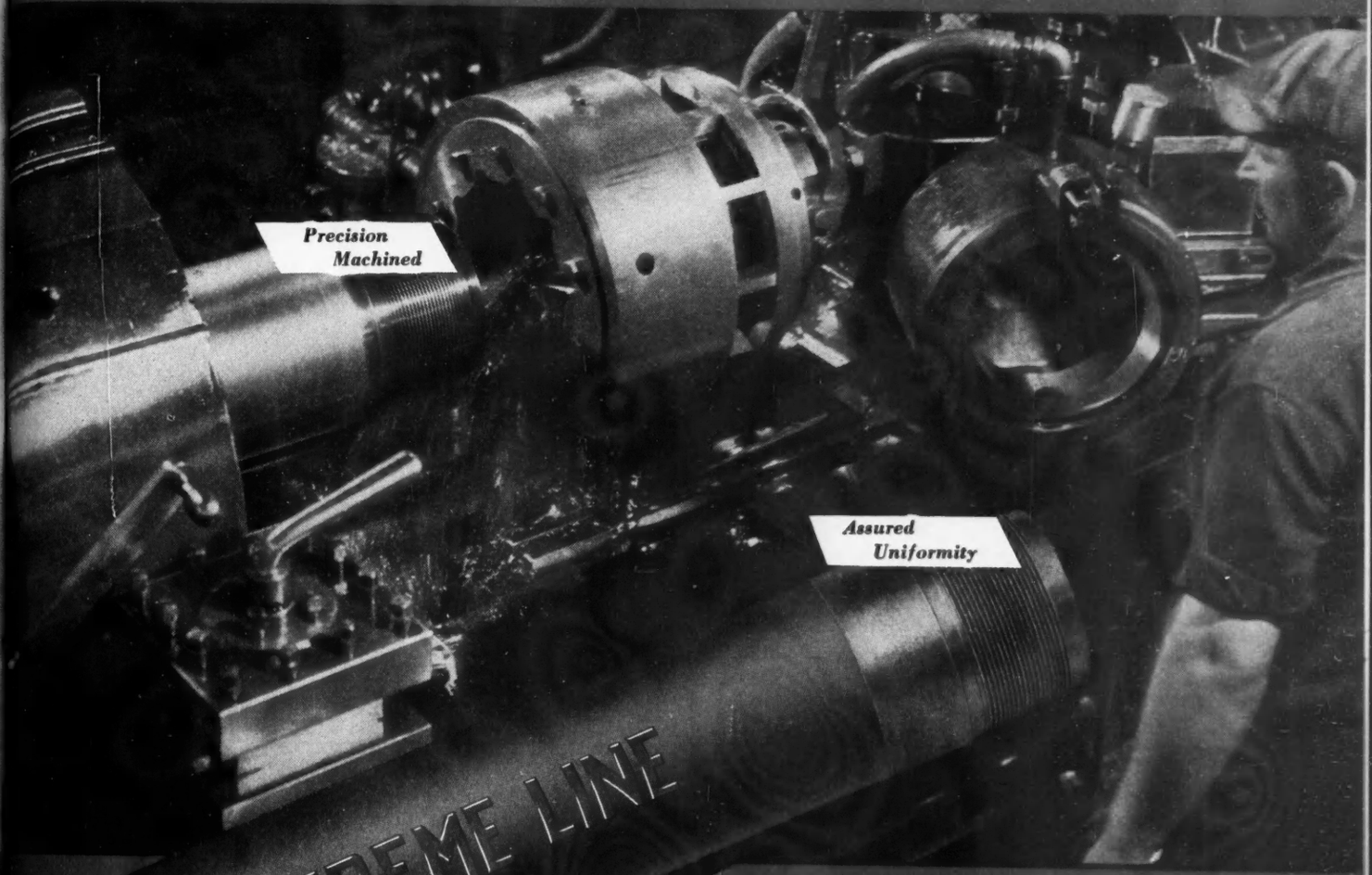
STANDARD SEAMLESS EXTREME LINE CASING



U. S. Patent . . . No. 1,927,636
U. S. Patent . . . No. 2,062,407

THE SEAL AND THE THREADS ARE *Right*

To better meet the rapidly changing oil field casing requirements, "Spang-Chalfant" has developed in "Standard" Seamless *Extreme Line Casing*—a radically different and improved oil well casing having extraordinary joint characteristics.

This streamlined pipe, which is practically self-aligning in stabbing, cannot be cross-threaded in making up joints and when made tong-tight assures 100 per cent leak resistance even though the pipe may be subjected to heavy loads in bending or tension.

It combines these highly desirable advantages:

1. High Joint Strength
2. Minimum Diameter at Joint
3. Maximum Speed in Running
4. Positive Resistance to Leakage
5. High Resistance to Damage

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GENERAL OFFICES: CLARK BUILDING, PITTSBURGH, PA.

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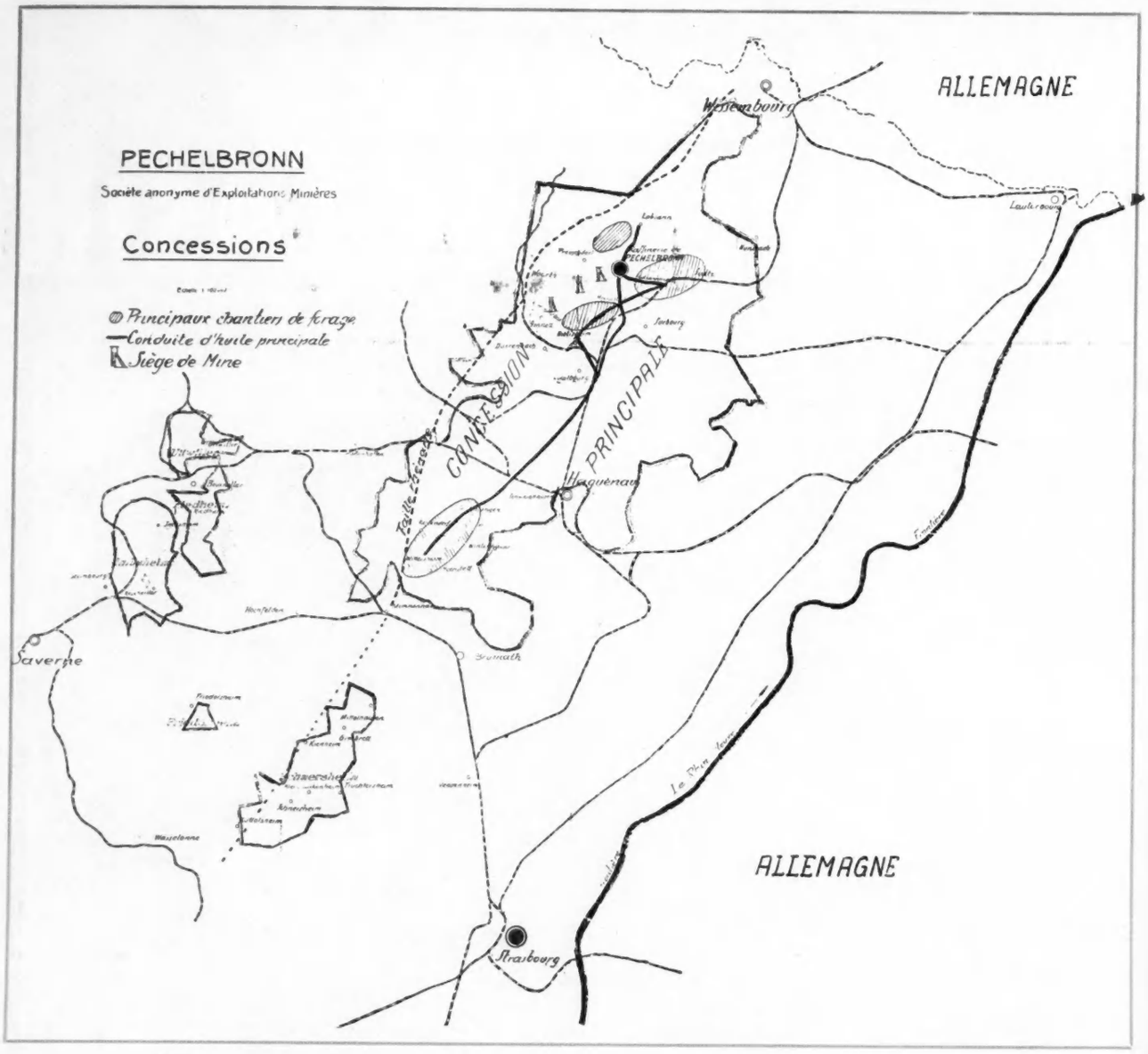

willer, and between Soultz and Kutzenhausen, and between Hohlschloch and Walbourg, and between Ohlungen and Wittersheim. The areas around Merkwiller-Pechelbronn, Preuschdorf, Gunstedt and Biblisheim are covered with a network of mine galleries of a type peculiar to Pechelbronn field. (The old drill holes have been plugged back, the casing recovered, and the oil horizons and mine galleries have been separated from the water sands by cement).

Oil is delivered through pipe lines from the pools of the Pechelbronn field to the refinery in Pechelbronn by pump stations powered with electricity. These contain about 700 pumps. (Pechelbronn Oil Company recently built a new refinery at Donges, but it, however, handles only foreign crude oil.) All drilling and lifting (pumping) is done by electricity. Every engine house on every rig has two motors, one for drilling, one for pumping.

Percussion Method Dominates

Percussion is the dominant method of drilling in Pechelbronn oil field. This method involves constant circulation of mud for the processes used locally. The rigid drilling body consists of 60-millimeter or 52-millimeter drilling pipes used in conjunction with an eccentric bit of a type that has been found especially suitable for Pechelbronn field formations. As a general rule, the common method used here calls for direct circulation of colloidal mud. But in the wildcat areas of the concession use of reversed circulation is involved, due to the fact that our local experience is that this method results in more efficient gathering of formation samples. When the reverse circulation is used cuttings are delivered to the surface through the drill pipe and not through the annular space between the drill pipe and the casing. Likewise, employment of reverse circulation in drilling wells of exploratory nature calls for setting the guide casing with a cement job at from 50 to 80 meters. For this purpose pipe of 368, 318 or 279 millimeters diameter is used.

Six Hook-Ups Used

For wildcatting and for completion of the deepest holes in Pechelbronn concession, six cable tool hook-ups of the portable type are found very useful.

One type of rig uses a derrick constructed entirely of wood. Legs of these derricks are not formed by two planks nailed together so as to form (in plan) a right angle, as is the case in most wooden derricks

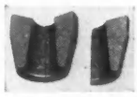

Fig. 623
PIN SLIPS

Fig. 619
COMBINATION
SOCKET

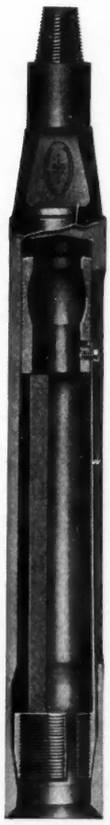

Fig. 626
FULL-CIRCLE
THREE-SLIP
SOCKET

Unchallenged!

The HIGHER STANDARD

SPANG SLIP SOCKETS

The 40 years of Spang leadership have witnessed many changes in the development of the world's great oil fields. Production has been tremendously increased, wells have been drilled to even greater depths, and thousands of difficult fishing jobs have been encountered and solved.

In looking back over the progress of those years, *this fact stands out*—THE SUPERIORITY OF SPANG "HIGHER STANDARD" SLIP SOCKETS REMAINS UNCHALLENGED! Through constant study and actual field tests, Spang has developed tools to satisfy every fishing requirement.

For service, for reliability, for economy—specify Spang "Higher Standard" Cable Tools. Write for catalog.

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SPANG

CABLE TOOLS

used in America. Instead, they are formed by the trimmed tree trunk, or spar timber. Electric hoists are used to erect the three legs to reduce the number of men required on the job.

Last year a number of tests were drilled in the northern part of the concession between Soultz and Wissembourg to test that wildcat region for production possibilities. Though cores recovered from these tests showed oil saturation in a number of instances, no commercially productive horizons were discovered. The wildcats were drilled to depths exceeding 700 meters, and the drillers had considerable trouble with freezing pipe, due to sandstones and heavy layers (dense formations). However, the area presented nothing really serious in the way of a fishing job.

In the Kutzenhausen pool of Pechelbronn more interesting developments have resulted from drilling. It was here that well No. 3685 was drilled to 1001 meters, cementing 203-millimeter casing at 720 meters and finding a new producing horizon at 925 meters in the Keuper formation. The production test on No. 3685, which is the deepest well in all of the Pechelbronn concession, showed 20 tons of flowing production per day, an indicated performance which the well lived up to when completed.

Rotary Is Introduced

No. 3685 marks an important step in Pechelbronn development for another reason besides its depth record and credit for discovering a new horizon. It is the well which generated in Pechelbronn Oil Company engineers the intention of introducing the rotary rig into Pechelbronn fields. It is hoped that additional, and deeper, tests drilled with rotaries in the Kutzenhausen section of Pechelbronn may enhance the rating of the concession as an oil reserve.

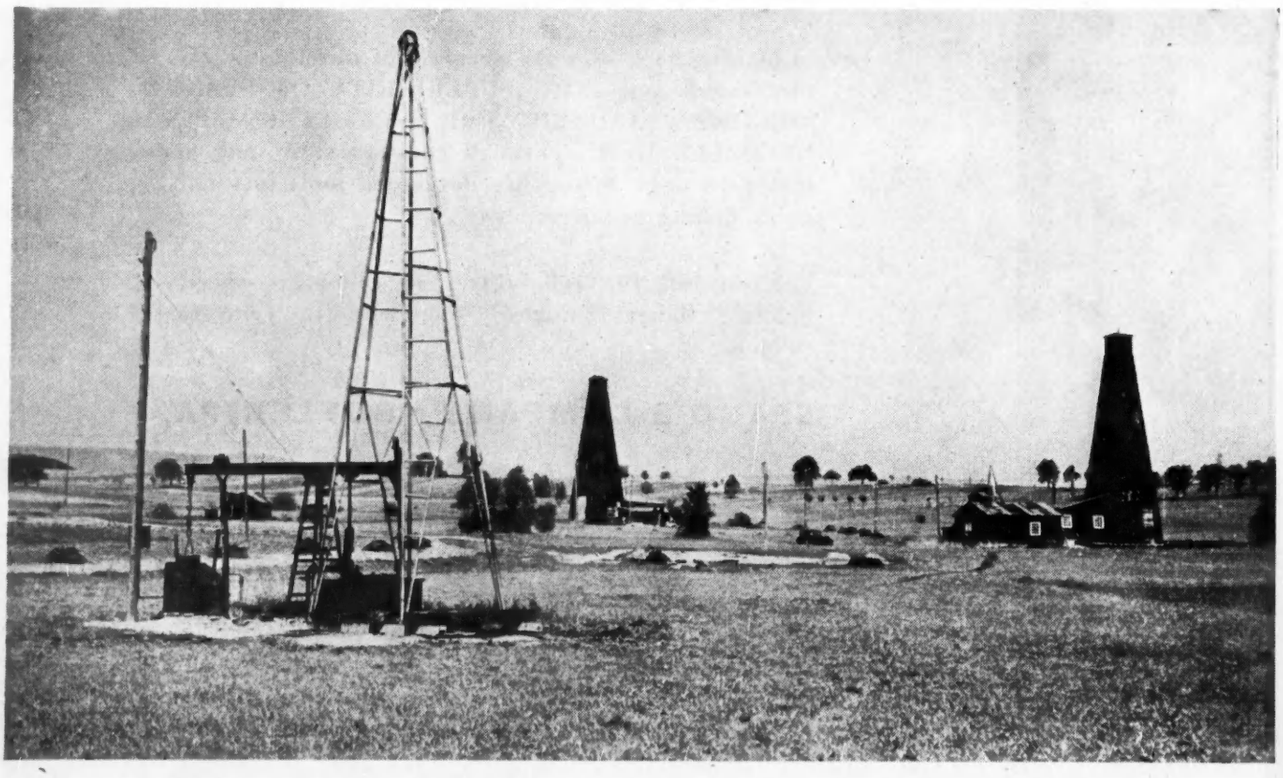
Of recent months fairly intensive drilling activity has been noticed in the southern part of the concession near Brumath, where most of the completions have been producers.

Since last autumn, in the area of Hirzbach, near Altkirch and between Belfort and Mulhouse in the southern part of Alsace, Pechelbronn Drilling and Geological Service has conducted an important wildcat campaign, using five rigs. No deep holes have been drilled in the area, all interest having been devoted heretofore to testing the upper geological strata. Thus far four wildcat completions have been recorded. Geologists of the company feel that the area being prospected will, as drilling progresses, be of interest geologically, regardless of whether commercial production is developed. Sand cuts at shallow depths have shown traces of dry oil.

13,448 Meters Drilled In Wildcats

Last year Pechelbronn concession accounted for 109 completions. Of these 48 were commercially productive and 61 were failures. Of the 42,813 meters drilled in the fields, 29,365 meters represented drilling on wells that produced when completed. The remaining 13,448 meters represented the wildcats. Fourteen of the 42 wildcats started by the company in 1935 were left over for completion in 1936. The average depth of these tests was 474 meters, the maximum depth of any well among those listed in the current campaign being 1001 meters, as recorded in the completion of No. 3685, and the minimum being 152 meters. For the last 12 months, 58 percent of the days were spent in drilling; rigging up and tearing down time amounted to 15 percent of the days; fishing jobs required 2½ percent, and bailing accounted for seven percent of the days.

Production of crude oil from the various Pechelbronn pools amounts to about 75,000 tons annually of which 42,000 tons are obtained by pumping and flowing, and the remaining 34,000 tons are obtained by mining, with the average initial output of completions being around six tons per day.



Panorama of Pechelbronn-Kutsenhausen oil field. To the foreground is a medium light pumping rig, and in the background two Raky rigs.

Adding Storage

HAS UNSETTLING EFFECT ON GENERAL MARKET SITUATION

THE markets lately have been generally unsettled, with additions to crude oil storage causing some concern, and prices of refined products at the refineries have lost some ground.

Not only refined gasoline, but also natural gasoline, and both light and heavy fuel oils have been affected by price declines in the Mid-Continent.

Tank car prices in effect late last week were one eighth cent a gallon lower than a week before in numerous instances, in both the Oklahoma and the Chicago markets.

Heavy Production Disturbing

Crude oil production has been reaching new all-time peaks nearly every week this year. Until lately the remarkably rising consumption was absorbing the record output of the wells, but during this month the production has been greater than the market required, and substantial additions have been made to crude storage.

Gasoline stocks, too, have been increasing, but only about in line with the usual trend for this time of the year, and the gasoline inventories do not appear excessive, in view of the expected high consumption this spring and summer. Consequently, the additions to gasoline storage are not causing as much anxiety as the additions to crude stocks.

Crude Stocks Increasing

Crude oil inventories are at a comparatively low level, following a reduction to the lowest point for years. But until recently the withdrawals were still in progress, and the turning of the trend of crude stocks back upward represents a less favorable development.

Crude production allowables for March are more liberal than those in February, the states having more greatly exceeded the Bureau of Mines recommendations. This accounts for the current building up of crude storage.

Quotations Lower

Natural gasoline tank car prices in Oklahoma were reduced one quarter cent a gallon last week.

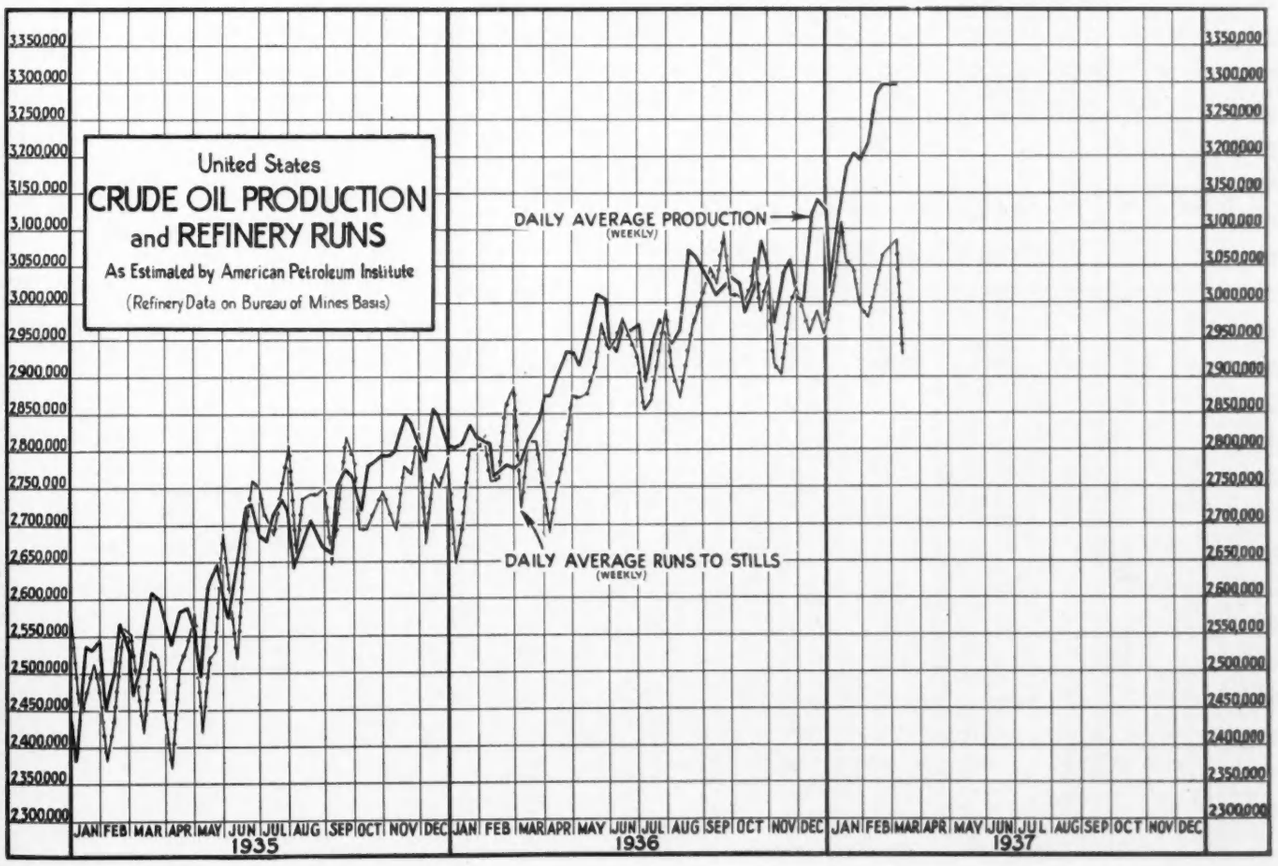
The refined gasoline market, too, was unsettled, although there was in prospect some improvement in demand, because of milder weather. Prices were one eighth cent lower in various instances.

The weather conditions also apparently were responsible for lighter demand for light fuels and more plentiful supplies. Prices consequently were being shaded.

The heavier oils were in good demand in the Oklahoma market, with supplies relatively scarce, but in the Chicago market the prices that prevailed last week were from 2½ to 5 cents a barrel lower than one week previously.

Gasoline Prices

U. S. motor gasoline prices f.o.b. Oklahoma refineries last week were ranging from 4⅝ to 4⅞ cents a gallon for



the third grade, 62 octane and below; from 5⅛ to 5⅜ cents for the second grade, 63 to 67 octane; and from 5⅝ to 5⅞ cents for the 68 to 70 octane grade.

In the Chicago market the corresponding prices were 4⅜ to 4¾ cents, 4¾ to 5 cents, and 5⅛ to 5¾ cents.

At refineries in East Texas the usual third grade gasoline on the market continued priced at 4¾ cents a gallon.

Kerosine and Fuel Oils

Kerosine prices remained generally unchanged last week. At the Oklahoma refineries they ranged from 4⅛ to 4⅜ cents a gallon for the 41-43 water white grade, and from 4¼ to 4½ cents for the 42-44 water white grade. The same minimum prices prevailed in the Chicago market, but maximum prices were not as high by one eighth cent.

In the Chicago market the No. 1 white burning oils were priced from 4 to 4⅛ cents a gallon, and the No. 1 straw from 3¾ to 4 cents. The No. 2 straw was 3½ to 3¾ cents, and the No. 2 dark from 3⅜ to 3⅝ cents. No. 3 oils were 3¼ to 3½ cents a gallon.

Industrial consumers found the heavier oils priced at 95 cents to $1.05 a barrel for the No. 4 grade, 82½ to 90 cents for the No. 5, and 77½ to 85 cents for the No. 6 grade.

CRUDE PRICES

Complete table of prices paid for crude oil at the well in principal fields will be found on page 48 of The OIL WEEKLY, March 1. Hereafter this schedule will appear only in the first issue of each month except when changes are announced.

OFFICIALLY A RECORD

Bureau's January report shows slight stock gain

Washington.—Eclipsing all previous records, daily average crude production in January touched a new peak of 3,179,600 barrels, 30,000 barrels above the December figure and 315,000 barrels above the average for January, 1936, according to the monthly report of the Bureau of Mines, issue March 11.

Total production for the month was 98,567,000 barrels, more than 900,000 barrels above the December figure of 97,652,000 barrels, nearly 10,000,000 barrels above the January, 1936, total of 88,820,000 barrels, and almost 20,000,000 barrels above the January, 1935, output of 78,720,000 barrels, the bureau announced.

The increased January output was due to an increase of 40,000 barrels in the Texas daily average, the net from the other states declining about 10,000 barrels. All the major districts in Texas shared in the increase, the bureau showed, the gains in the Coastal fields and Rodessa being outstanding.

California's production showed the usual steadiness at just over 580,000 barrels a day.

Production in Kansas showed a decrease of 2900 barrels.

Oklahoma's average remained unchanged at 605,400 barrels, but both Louisiana and New Mexico set new records.

The number of wells completed rose from 1525 in December to 1580 in January, but the total initial was slightly lower at 695,500 barrels. Oil well completions in Texas were 802 compared with 616 in January, 1936.

Runs at Peak

Under the impetus of increasing fuel oil consumption, crude runs to stills rose to a new peak of 3,038,000 barrels daily in January, the bureau reported.

As far as the balance of supply and demand of crude was concerned, the gain in production was offset by a large decline in imports; consequently, the increase in crude runs was reflected in heavier withdrawals from stocks, the net decline for the month being 1,425,000 barrels, with declines in the first half of the month outweighing gains in the last half.

The yield of gasoline was 43.2 percent, compared with 44.1 percent in December and 42.7 percent in January, 1936, and the indicated domestic demand for motor fuel was 33,696,000 barrels, a 4 percent gain over last year. "This relatively small increase, following the large gain in December, probably reflects buying in anticipation of the price increases of January," the bureau commented.

The demand for light fuel oils was 26 percent higher than a year ago, but the demand for the heavy grades was up only 4 percent. Stocks of finished and unfinished gasoline rose to 71,416,000 barrels, an increase of 8,341,000 barrels for the month.

Details of the supply and demand, compared with December are shown in the accompanying tabulation.

Weekly Trends of United States Production and Stocks

(Figures from American Petroleum Institute, except crude stocks from Bureau of Mines.)

Week Ended—	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	Gas & Fuel Oil Stocks (Barrels)
February 6, 1937	3,220,750	2,980,000	286,116,000	70,535,000	101,136,000
February 13	3,286,050	3,020,000	286,158,000	73,585,000	100,735,000
February 20	3,295,950	3,065,000	287,574,000	74,798,000	99,391,000
February 27	3,296,100	3,085,000	288,121,000	78,786,000	99,534,000
March 6	3,298,800	2,930,000	.....	80,102,000	99,115,000

Summary of Wells Completed in the United States Week Ending March 13, 1937

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total Completions 1937	Total Completions this Date 1936
Alabama	....	....	....	....	.....	1	....
Arkansas	3	1	....	2	37	13	18
California	19	17	....	2	3,725	239	163
Colorado	....	....	....	....	.....	3	1
Florida	....	....	....	....	.....	....	....
Illinois	....	....	....	....	.....	5	4
Indiana	....	....	....	....	.....	32	50
Kansas	39	24	2	13	28,548	398	259
Kentucky	8	7	....	1	310	48	21
Louisiana	18	10	....	8	3,206	134	180
Michigan	22	6	3	13	2,520	162	137
Mississippi	....	....	....	....	.....	5	1
Montana	....	....	....	....	.....	16	18
Nebraska	....	....	....	....	.....	....	....
New Mexico	11	10	1	....	11,132	132	86
New York	3	....	1	2	.....	3	....
Ohio	41	8	14	19	86	351	421
Oklahoma	61	49	2	10	72,396	569	502
Pennsylvania	3	....	3	....	.....	20	....
Texas	262	197	3	62	319,194	2,678	2,163
Utah	....	....	....	....	.....	....	....
West Virginia	28	6	18	4	28	185	127
Wyoming	2	....	....	2	.....	20	6
Total this week	520	335	47	138	441,782	5,015	4,157
Total last week	516	317	71	128	341,981	....	....
Total this year	5,015	3,823	486	1,246	4,240,222	....	....

Comparison of Permits Granted for New Wells

STATE	Week Ending Mar. 13	Total this Mo.	Total this Year	Total this Date Last Year	1936 Year Total
Arkansas	5	8	20	16	103
California	37	56	258	155	1,054
Louisiana	15	35	175	205	1,107
Kansas	47	77	419	311	1,873
Michigan	20	34	171	109	762
Oklahoma	47	96	501	475	2,594
Texas	404	885	3,274	2,302	15,582
Total	575	1,191	4,818	3,573	23,075

New U.S. Peak

OIL PRODUCTION REACHES 3,381,000 BARRELS DAILY

THE steady rise in United States crude oil production, which has brought a new all-time record nearly every week this year, continued during the past week, ended March 13, with the new peak at 3,381,600 barrels daily.

This unprecedented output of the country's oil wells was 69,525 barrels a day greater than in the previous week, and exceeded the Bureau of Mines recommendations 222,600 barrels a day.

The substantial increase over the previous week reflected higher allowables ordered in most of the leading producing states for March. Incidentally, the March state allowables, in the aggregate, permit a substantially greater excess over the Bureau of Mines recommendation than did the February state allowables.

The material rise of production last week resulted primarily from gains in Oklahoma, Texas, California, and New Mexico. The increases in those states greatly outweighed small declines in Kansas and Louisiana.

Oklahoma last week averaged 615,925 barrels daily, or 37,800 barrels a day more than in the previous week. The new figure was 25,225 barrels a day more than the Bureau of Mines allocation.

Texas output continued to increase, averaging 1,391,700 barrels daily or 21,600 barrels a day more than in the previous week, and 135,100 barrels a day more than the federal estimate of demand.

California production was up 8,000 barrels at 593,000 barrels daily, which was 22,100 barrels a day more than the state's allocation.

New Mexico's new state allowables resulted in output of 103,100 barrels daily, which was 5600 barrels a day above the previous week's rate and 14,900 barrels daily more than the Bureau of Mines recommendation.

Supply and Demand of All Oil

(Bureau of Mines Report—Figures in thousands of barrels.)

	Jan., 1937	Dec., 1936
Supply		
Domestic Crude Production	98,567	97,652
Daily average	3,180	3,150
Natural Gasoline	3,732	3,965
Benzol	247	246
Total production	102,546	101,863
Daily average	3,308	3,286
Imports, crude (bond)	.....	266
Crude (domestic use)	1,129	2,348
Refined (bond)	1,180	1,314
Refined (domestic use)	679	792
Total new supply all oils	105,534	106,583
Daily average	3,404	3,438
Demand		
Total Crude demand	104,049	110,423
Daily average	3,356	3,562
Exports, crude	3,596	3,666
Refined	7,935	6,506
Domestic demand, motor fuel	33,696	39,393
Kerosine	5,297	6,148
Gas oil and distillate	14,856	14,160
Residual fuel oil	28,039	28,332
Lubricants	1,763	1,821
Wax	104	102
Coke	520	556
Asphalt	894	1,081
Road oil	219	249
Still gas	4,519	4,597
Miscellaneous	157	165
Losses	2,454	3,647
Total domestic demand	92,518	100,251
Daily average	2,984	3,233
Stocks		
Crude	286,759	288,184
Natural gasoline	4,032	4,055
Refined products	229,340	226,407
Total all oils	520,131	518,646
Days' supply	155	146

United States Crude Oil Production

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Recommendation (Daily in Mar.)	ACTUAL PRODUCTION: BARRELS DAILY FOR WEEK ENDING March 13	March 6
TEXAS—			
Texas Panhandle	.....	74,200	73,800
North Texas	.....	67,800	67,500
West Central Texas	.....	32,300	32,100
West Texas	.....	205,400	199,600
East Central Texas	.....	119,700	115,400
East Texas Field	.....	453,700	452,900
South Texas	.....	231,200	225,300
Texas Gulf Coast	.....	207,400	203,500
Total Texas	**1,256,600**	**1,391,700**	**1,370,100**
OKLAHOMA—			
Oklahoma City	.....	141,750	131,875
Seminole Area	.....	134,875	132,025
Crescent	.....	12,950	12,700
Lucien	.....	13,500	13,025
Fitts	.....	89,675	76,125
Edmund	.....	23,475	15,625
Moore	.....	13,000	9,625
Others	.....	186,700	187,125
Total Oklahoma	**590,700**	**615,925**	**578,125**
KANSAS—			
Ritz-Canton	.....	5,475	5,675
Chase	.....	10,300	11,275
Hollow-Nikkel	.....	4,100	3,575
Sedgwick	.....	4,800	4,600
Burrton	.....	16,375	15,875
Lorraine	.....	5,150	6,850
Russell County	.....	25,475	28,450
Silica	.....	15,225	16,025
Others	.....	96,375	95,025
Total Kansas	**178,000**	**183,275**	**187,350**
LOUISIANA—			
North Louisiana	.....	68,700	72,300
South Louisiana	.....	175,800	173,500
Total Louisiana	**240,000**	**244,500**	**245,800**
ARKANSAS	**28,500**	**27,300**	**26,300**
CALIFORNIA—			
Long Beach	.....	61,500	61,500
Santa Fe Springs	.....	45,500	43,500
Huntington Beach	.....	37,000	37,000
Dominguez	.....	24,500	23,500
Inglewood	.....	14,000	12,000
Ventura Avenue	.....	33,500	34,000
Seal Beach	.....	9,000	8,000
Midway-Sunset	.....	68,000	67,000
Elwood	.....	9,000	9,000
Kettleman Hills	.....	77,500	76,000
Mountain View	.....	21,000	21,000
Playa del Rey	.....	9,500	10,000
Others	.....	183,000	182,500
Total California	**570,900**	**593,000**	**585,000**
MOUNTAIN STATES—			
Wyoming	42,200	52,400	52,200
Montana	14,660	15,800	15,500
Colorado	4,300	4,400	4,500
Total Rocky Mountain States	**61,100**	**72,600**	**72,200**
NEW MEXICO	**88,200**	**103,100**	**97,500**
EASTERN STATES	**114,700**	**116,400**	**116,900**
MICHIGAN	**30,300**	**33,800**	**32,800**
Total United States	**3,159,000**	**3,381,600**	**3,312,075**

WORLD DEVELOPMENT and TECHNOLOGY

Edited by
WM. V. GROSS, Associate Editor

Oil Area Extended

ONE TURNER VALLEY CRUDE WELL IN "NAPHTHA" AREA

A 14-hour test last week on Westside Royalties well, Turner Valley, Alberta, Canada, which reached the Madison limestone two weeks ago, indicated production for a 24-hour period to be 254 barrels of 44 or 45 gravity crude.

Newfold Royalties well, at one time two weeks behind the Westside which was held up by a finishing job, encountered a softer formation, and last week a production test was scheduled. Bailing was in progress 3200 feet from the bottom and the well was expected to blow in shortly. Officials planned to allow it to blow wild for a few hours and clear itself before taking a test.

The Westside strike dispelled doubts that the location was in the wet gas, or naphtha, area of the field, and indicates that the crude oil area extends some distance to the east of the producing Foundation well in the extreme south end of the valley structure. Both wells are controlled by the R. A. Brown interests, which also hold the Turner Valley Royalties and the B. & B. Royalties wells, both large producers brought in recently.

Taber Wildcat Showing Oil

Plains Petroleum Corporation's wildcat on the Taber structure caused considerable excitement when it encountered crude at 3204 feet, with an estimated 40 feet of the producing member still to be drilled. It is the first test in the plains area during the present drilling activity, and is located on the Crow's Nest branch of the Canadian-Pacific Railroad. A short pipe line will be necessary to connect the well with the railroad. Plains Petroleum Corporation is financed by Toronto, Ohio, and Pennsylvania capital, and is under the direction of Walter Wittlinger, Cleveland operator. Robert L. Clancy, Toronto, is president; Frank Lyons, Canton, Ohio, vice president, and John Clarke, Toronto, secretary-treasurer.

Plans were announced for drilling several wells at Turner Valley during the summer months, raising the number of projected wells for the coming season well above 60. It is estimated that more than 100 will be drilled in 1937.

Lease Prices Soar

Record prices for petroleum and natural gas rights on 80 acres of land were realized by the provincial government last week. One parcel brought $532 an acre from J. Fred Scott, Calgary, the highest of eight tenders submitted. It is located just west of the Davies Petroleum well site. The second parcel was bought by Credit Securities, Ltd., for $277.75 an acre, and lies immediately northwest of Parcel No. 1. The previous high was $260 an acre, paid for a parcel following the initial production test at the Foundation well. The location was directly west of the large producers.

Government Reserves Land

Hon. N. E. Tanner, minister of lands and mines, announced that the provincial government is reserving the oil rights on 61,000,000 acres of Crown land in the province of Alberta. It represents three-eighths of the area of the whole province, but will not affect development in the Turner Valley field.

Plans to put into effect a 40-hour week for oil field workers in the Alberta province were outlined by Clayton Adams, chairman of the provincial board of industrial relations. Purpose of the regulation would be to spread employment. In classifications where there was a shortage of skilled workers the proposed 40-hour plan would not apply, particularly if it held up drilling, Mr. Adams said.

Word from the Petrolia fields, in Lambton County, Ontario, is to the effect that acidizing of shallow wells in that area is proving successful.

MEET IN MOSCOW
International Geological Congress convenes July

Moscow.—The seventeenth International Geological Congress, which will be held at Moscow in July, will be participated in by hundreds of delegates from many countries. Papers will be head and discussions will be held on the coal and petroleum resources of the world and other phases of mining research. Members will also be given the opportunity to make scientific excursions throughout the U.S.S.R. before and after the convention.

Preceding the Congress, which will assemble in Moscow July 20th, there will be tours both to the south and the north, a visit to the Caucasus Mountain region and a cruise on the Volga.

Following the Congress, a special group will be organized to visit the various oil districts of the U.S.S.R. in the Caucasus. Tours have also been arranged to Magnetogorsk in the Urals, and other giant metallurgical and mining centers constructed during the first Five-Year Plan. Special trips to Siberia, to the newly developed regions in the Arctic, and the Donetz basin in the Ukraine have been organized by Intourist, the travel company of the Soviet Union.

AUSTRIA'S LARGEST
Expect 1900 barrels from Zistersdorf well

Gardner Richardson of Vienna advises that the latest completion of Erdolproduktionsgesellschaft in Zistersdorf field is the largest completed to date in Austria, having yielded 55 metric tons the first day, 145 the second day, and 210 the third day from sands topped at 910 meters, or about 2994 feet.

Operators expect the test to yield from 270 to 300 metric tons per day when it has thoroughly cleaned itself. This would be about 1900 or 2100 barrels, or approximately one fourth of Austria's crude oil requirements, Richardson states.

PLAN REFINERY

A. H. Mayland, president of Mercury Oils Limited, Calgary, Alberta, Canada, recently confirmed reports that his company is considering construction of a cracking refinery in Calgary to cost approximately $500,000. Mayland stated the refinery will be used for cracking crude oil produced in Turner Valley.

STUDY GAS WASTE

Hon. N. E. Tanner, provincial minister of lands and mines of Alberta, Canada, stated recently that the government would investigate the wastage of gas in the Turner Valley oil field to determine the necessity of conservation regulations. A system of gas quotas based on production figures may be resumed.

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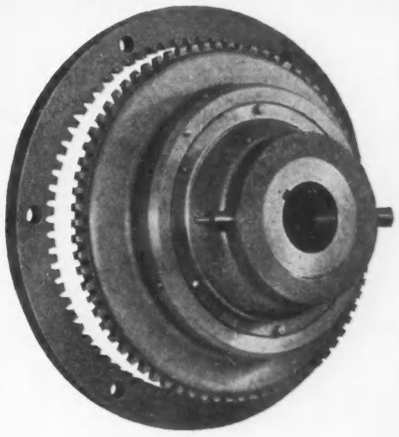

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TWIN DISC
CLUTCHES

Y. P. F. Growing

PRODUCING NEARLY HALF OF ARGENTINA OUTPUT

With the exception of Salta field, Yacimientos Petroliferos Fiscales, the government owned and operated oil company, is leading in production in every field in Argentina. The nation yielded 2,457,094 cubic meters in 1936; Yacimientos Petroliferos Fiscales' share of it was 1,140,188 cubic meters.

In Commodoro Rivadavia, Argentina's main producer, Yacimientos Petroliferos Fiscales' production amounted to 1,018,299 cubic meters in 1936, or substantially over 50 percent of the field's yield of 1,996,821 cubic meters for the year. Five other operators produced the remaining 978,522 cubic meters.

In Plaza Huincul area it was almost the same story, Yacimientos Petroliferos Fiscales obtaining 79,010 cubic meters out of the field's total yield of 166,181 cubic meters during the year.

Output Up 8 Percent

Argentina's production of crude petroleum in 1936 was an increase of 184,117 cubic meters, or 8.1 percent, over 1935 production, which was 2,272,977 cubic meters.

Production on state owned lands in 1936 was 1,140,188 cubic meters, and the balance, 1,316,906 cubic meters, was produced by private companies.

Commodoro Rivadavia fields produced 1,996,821 cubic meters in 1936, compared with 1,813,506 in 1935. Four companies in Plaza Huincul fields recovered 166,181 cubic meters in 1936 as against 146,494 cubic meters in 1935. Notable production increases were effected by Yacimientos Petroliferos Fiscales in Plaza Huincul, Salta and Mendoza.

Production by fields and companies in 1935 and 1936 is shown in the accompanying table.

USING MORE OIL

Consumption in France 4,507,545 tons in 1936

Consumption of petroleum products in France during 1936 registered a 10 percent increase over 1935, according to a report from Vice Consul D. B. Levis, Paris, made public by the Commerce Department.

Consumption totals for the two years were, respectively, 4,507,545 metric tons and 4,086,616 tons. Increased consumption of heavy gasoline, gas oil, fuel oil, lubricating oils and road oils accounted for the increase, statistics show.

Domestic refineries supply approximately two-thirds of the requirements of the French petroleum market. Approximately 6,027,000 metric tons of petroleum was processed by French refineries in 1936 against 5,645,000 tons in the preceding year. The finished products amounted to 4,265,350 tons, compared with 5,040,000 tons.

Exports of petroleum products from France (including fuel for foreign vessels) during 1936 amounted to 513,371 metric tons, compared with 539,601 tons in 1935.

GETS CONCESSIONS

Venezuelan deal involves 659,670 hectares

Reports from Maracaibo state Venezuelan Oil Development Company, Ltd., London, a subsidiary of the Royal Dutch Shell combine, recently obtained concessions from the Venezuelan government for the exploration and exploitation of 659,670 hectares in the states of Zulia, Apure, Barinas and Trujillo.

Considerations involved an advance payment of $2,655,531 against initial taxes, it is said, and a promise on the part of the company to either build a 10,000-barrel refinery in Maracaibo Basin or a 15,000-barrel daily capacity refinery if a location in Venezuela outside the basin is selected by the company. Shell interests already have a refinery at San Lorenzo, in the basin, with a daily capacity of 11,000 barrels.

Of the above acreage, 526,100 hectares were granted for exploration and 133,570 were granted for exploitation, it is said.

YIELD SLIGHTLY UP

German production is 3,111,830 barrels

Germany's production of 3,111,830 barrels in 1936, a three percent gain over 1935, brought the total oil recovered in that country since 1872 up to 28,500,428 barrels, 98 percent of which has been produced from the Province of Hannover, according to J. Webb Benton of Bremen.

Hannover fields, although contributing 2,854,954 barrels of the nation's total in 1936, dropped four percent from their aggregate yield in 1935, which was 2,971,487 barrels.

PUERTO RICO SALES UP

Gasoline, lubricants, and other petroleum products shipped from continental United States to Puerto Rico sold for $2,387,000 in 1936, representing a gain of almost 40 percent over sales of petroleum products in 1935. Sales of all petroleum products for the last 10 years amounted to $22,670,809.

Although Puerto Rico has a considerable mileage of narrow-gauge railroad, the Islanders, profiting through the existence of some 2300 miles of excellent roads and highways which connect 72 separate municipalities, rely almost wholly upon the motor car and truck for their transportation needs. There are 18,000 motor vehicles registered in the island, including 3700 new units purchased from the United States last year. San Juan, the largest city, is served by a fleet of 135 large public buses which carry passengers between the city and adjacent suburbs. Last year's quantity shipments of gasoline to the island were the largest in 10 years.

Argentine Production, 1935-1936

	CUBIC METERS	
	1935	1936
Comodoro Rivadavia—		
Yacimientos Petroliferos Fiscales	857,026	1,018,299
Astra, Cia. Argentina de Petroleo	186,855	167,276
Ferrocarrilera	239,318	215,207
Industrial y Comercial	11,332	19,223
Diadema Argentina S. A.	513,838	570,644
Solano, Cia. Petrolifera Argentina	5,137	6,172
Total of Comodoro Rivadavia	1,813,506	1,996,821
Plaza Huincul—		
Yacimientos Petroliferos Fiscales	61,516	79,010
Standard Oil Co.	60,191	63,696
Astra, Cia. Argentina de Petroleo	3,731	3,100
La Republica (Standard Oil Co.)	21,056	20,375
Total of Plaza Huincul	146,494	166,181
Salta—		
Yacimientos Petroliferos Fiscales	19,232	33,298
Standard Oil Co.	284,930	248,348
Total of Salta	304,162	281,646
Mendoza—		
Yacimientos Petroliferos Fiscales	5,795	9,581
Rio Atuel Ltda.	2,743	2,865
Total of Mendoza	8,538	12,446
Jujuy—		
Yacimientos Petroliferos Fiscales	277	.....
Total of Jujuy	277	.....
GRAND TOTA	2,272,977	2,457,094

BEACONS

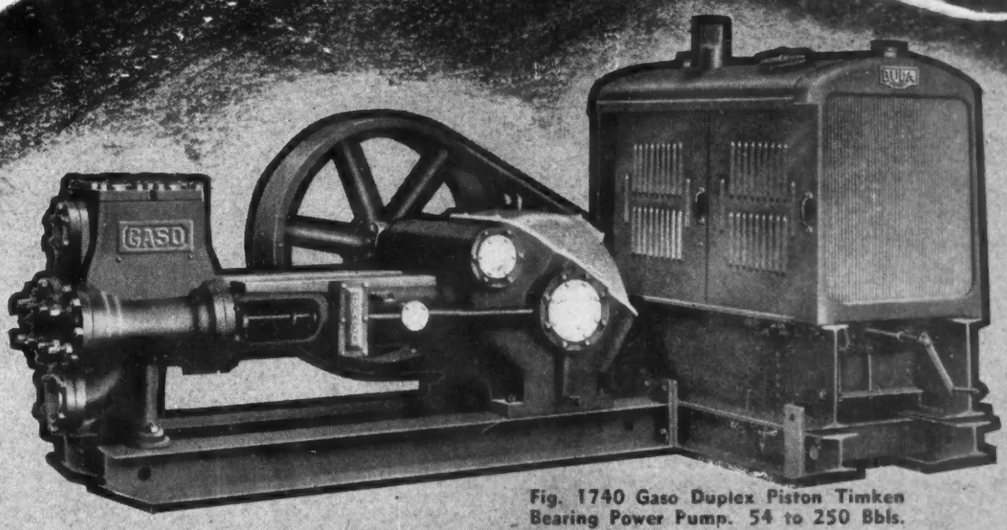

Fig. 1740 Gaso Duplex Piston Timken Bearing Power Pump. 54 to 250 Bbls.

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Complete Gaso Condensed Catalog, in 1937 Composite Catalog

GASO PUMPS
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Shallow Strike

TEST NEAR MOUNDS SLOPS OVER; BETHEL IS EXTENDED

WEEKLY STAFF REPORT

Tulsa.—An unidentified sand which yielded fairly good production was found in Creek County, and the North Bethel pool of Seminole County received a ½-mile extension to the north. Word from Pontotoc County stated signs were rather disappointing at the test being carried down in Section 33-2n-7e, where Oklahoma oil men still hope to see a new pool opened.

The closely watched test in Pontotoc County is E. H. Moore's Muse 1, SW NE SE 33-2n-7e, across the fault and south of the Fitts field. The results of a test taken at the well last week were disappointing and it was being drilled ahead. No show of oil was found when the well was tested at 4445 feet, and the same result was had when a test was made at 4537 feet. The well drilled into the Viola and Bromide, which were both dry. Top of the Bromide was found at 4680 feet, and a drill stem test made at 4687 feet had no show. It was drilling ahead.

Moore's Mack 5, SWc SE 28-2n-7e, an edge well and east offset to the discovery well in the Oil Creek sand, topped that formation at 4673 feet, and drilled to 4740 feet where it had a hole full of water. It is stated the well is to be drilled ahead to the Arbuckle lime.

A sand, as yet unidentified, was found last week at Murta & Wilson's Anthis 1, SWc NE 12-16n-11e, west of Mounds in Creek County. The sand was found at 2350 feet, and oil filled the hole and slopped over the top of the casing, indicating gas pressure. The pay is below the Dutcher sand. Operators were starting for the Wilcox sand and were reaming to set pipe.

Bethel Is Extended

Crosbie & Moran's Miller 1, SW SE SE 25-10n-7e, extended the North Bethel pool of Seminole County one-half mile north last week. The well flowed 20 barrels of oil during five minutes of the period opened. Top of the Cromwell sand was found at 3654 feet, and a ten-minute drill stem test indicated possibilities of the well. A large amount of territory is opened to the east as a result of findings in Miller 1, which has made the first major extension in the North Bethel pool.

Crosbie & Moran's Harjo 1, NE NW NE 35-10n-7e, on the west side of the same pool, swabbed 40 barrels of oil and 40 barrels of water through tubing from five feet of sand topped at 3689 feet.

Possible extension of the Bebee pool of Pontotoc County is looked for in W. A. Delaney's Starrett 1, SW SE NE 21-5n-5e, northeast of the pool proper. Pipe was set at 2545 feet and cement drilled at 2610 feet. The Viola lime was to be tested for producing possibilities.

Fitts Still Busy

Operations continued on a high scale in the Fitts field of Pontotoc County. J. Paul Getty, Inc., and Minnehoma Oil & Gas Company's Masters 2, NEc SW 23-2n-7e, was given a 24-hour potential of 2131 barrels of oil from the Hunton lime at 3855 feet. It also made 2,000,000 cubic feet of gas and no water. The well is a twin to Masters 1.

Stahl Petroleum Corporation's Dennis 9, SW NW SW 21-2n-7e, was given a potential of 3954 barrels of oil. Top of the Hunton lime was found at 4192 feet and drilled to 4360 feet where it was plugged back because of water encroachment. The plug-back total depth was 4170 feet, and the well was shot with 140 quarts between 3711 and 3738 feet, then acidized with 8000 gallons before production was obtained.

Blackstock Oil Company's Moody 4-A, SE SW SW 23-2n-7e, topped the Hunton lime at 3714 feet and drilled to 3855 feet where it was acidized, first with 3000 gallons and later with 7000 gallons. The well received a potential of 2131 barrels of oil and made 2,225,000 cubic feet of gas with no water.

Magnolia Petroleum Company's Hardin 10, NWc NE 30-2n-7e, topped the first Wilcox sand at 4315 feet, drilled to 4345 feet and was acidized with 10,000 gallons. The well was then given a potential of 2225 barrels of oil, and made 1,225,000 cubic feet of gas. Bottom hole pressure was estimated at 1610 pounds.

Another new producer in the pool was Sinclair Prairie Oil Company's Wooley 15-B, SW NE SW 22-2n-7e, which topped the Viola lime at 4090 feet and drilled to 4375 feet where it was acidized with 15,000 gallons. The well flowed 131 barrels of oil the first hour through tubing; 88 barrels the second hour, and 83 barrels the third hour. The well later established a potential of 981 barrels of oil in 24 hours.

E. H. Moore's Smith 8, SE NE NW 31-2n-7e, topped the Wilcox sand at 4485 feet and drilled to 4490 feet, where it flowed 1475 barrels of oil on a 24-hour potential test. Bottom-hole pressure was estimated at 1210 pounds.

Fleetborn Oil Company's Morin 6-A, NW SE SE 20-2n-7e, topped the Hunton lime at 3620 feet; topped the Sylvan shale at 3910 feet and cemented seven-inch casing at 3617 feet. The well was drilled to 3922 feet and acidized with 10,000 gallons. It was opened for 45 minutes and flowed 544 barrels of oil through casing and was shut in to take potential.

Sinclair Prairie Oil Company's Wooley 14-B, NW SE SW 22-2n-7e, drilled to 4400 feet in Bromide lime and had 3000 feet of water in the hole. It was plugged back to 4320 feet and operators were waiting on cement.

Retest Jesse Well

In the Jesse pool of Pontotoc County, a retest was taken on Mid-Continent Petroleum Corporation's Statler 1, SEc SW 2-1n-7e. The old potential was 647 barrels of oil and the new 24-hour potential, determined last week, was 1468 barrels of oil. The increase amounted to 821 barrels over the old test. Gas was estimated at 2,680,000 cubic feet. Two and one-half-inch tubing was run to 4245 feet.

LANGSTON EXTENDED

Test half mile southeast appears to be good well

Oklahoma City.—Outstanding among developments in the Oklahoma City sector the past week was extension of the Langston field of northeastern Logan County. Lucien, Moore and Crescent pools also had completions of importance.

Eason Oil Company, Transwestern Oil Company et al's Smith 1, SW NW NW 13-17n-1w, about one-half mile southeast of the Langston field, proved an extensioner when a drill stem test showed 1800 feet of oil in 50 minutes. Wilcox sand was tested between 5103 and 5128 feet. Seven-inch casing has been set and the firm intends to test this week.

Three Moore Completions

Three completions were made in the Moore field of Cleveland County, two of which were producers and the other was evidently too low on the structure to encounter production. Sinclair Prairie Oil Company's Rice 2, SEc NE 28-10n-2w, received a 24-hour potential of 19,406 barrels of oil from 7281 feet in the second Wilcox sand. On test the well made 1,349 barrels of oil and 54,400,000 cubic feet of gas the first hour, 927 barrels and 38,700,000 cubic feet the second hour, 786 barrels and 40,600,000 cubic feet the third hour and 712 barrels and 37,100,000 cubic feet of gas during the fourth hour of the test.

In the same pool, Gulf Oil Corporation's Allen 1, NE SW SW 27-10n-2w, was a failure at 7296 feet in the second Wilcox when it bailed 2,000 feet of fluid to encounter water. This test will be plugged back to the Simpson for a test of that formation. One location north of this well, the same firm's James 2, SE NW NW 27-10n-2w, topped the Wilcox at 7275 feet, was drilled to 7281 feet, and made 19,817 barrels and 38,500,000 cubic feet of gas. Two tests were made of the well, the last one showing 1274 barrels of oil the first hour cutting 30 percent salt water, 1163 barrels cut with 25 percent water the second hour, 1083 barrels cut with 20 percent water the third hour and 1038

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The method employed is original and entirely different from those previously used. The superiority of Sperry-Sun's Polar Core Orientation (U. S. Patents 1,792,639, 1,778,981 and others pending) lies, not only in its accuracy but also in the fact that it does not interfere with the progress of drilling. The orientation is determined in a laboratory, to which selected cores, taken by any type core barrels in the ordinary course of drilling and properly marked, are shipped from any distance. No special equipment is required at the well, there is no loss of drilling time. The resulting saving in time when translated into dollars shows a substantial saving over former methods.

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(Hewitt-Kuster)

"H-K" designed for open holes only — provides permanent, accurate, photographic records of inclination and direction on paper discs five minutes after removing instruments from hole. (U. S. Patents 1,812,994; 2,027,642 and others pending.)

Use THE SELF-CHECKING

SURWEL *Gyroscopic Clinograph*

"SURWEL" provides a map of the well at all depths, prepared from actual photographic records, made while going in and coming out. (U. S. Patents 1,124,068; 1,812,994; 1,898,473; 1,959,141; 1,960,038; 2,006,556; 2,012,138; 2,012,152; 2,012,455; 2,012,456 and others pending.)

Use THE SELF-CHECKING

SYFO *Clinograph*

"SYFO"—used on a wire line, as a "Go-Devil" inside the drill stem, or on sand or bailing line in open hole—affords quick, inexpensive daily records of vertical deviation in drilling, without the use of dangerous acids. (U. S. Patents 1,962,634; 2,013,875 and others pending.)

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barrels cut with 29 percent salt water the fourth hour. The productive limit of the pool evidently is between this location and the Allen 1.

Lucien Is Active

Shell Petroleum Corporation's Tate 1, CSE NE 36-21n-3w, in the Garfield extension to North Lucien pool of southwest Noble County, ran seven-inch casing to 5359 feet after obtaining a core showing good saturation between 5353 and 5359 feet. This well is a west offset to the discovery and may mean a partial definition of the trend now being developed.

In the same pool, Shell Petroleum Corporation's Guthrie 1, CNW SW 31-21n-2w, North Lucien pool, cored 2½ feet of lime and sand and one foot of dense lime between 5378 and 5383 feet.

OKLAHOMA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARTER COUNTY—		
Sinclair Prairie, J. S. Mullin 17, cnl ne se 4-4s-3w	35	1058
CLEVELAND COUNTY—		
Sinclair Prairie, Peaches "B" 1, ne ne nw 21-10n-2w	24,610	7296
COAL COUNTY—		
Continental, King 1, ne sw ne 26-1n-8e (pb 836)	50	5762
COMANCHE COUNTY—		
L. D. Wise, Cones 1, se se sw 11-1n-10w	*	2156
CREEK COUNTY—		
Sinclair Prairie, Slick 2, nw sw sw 3-17n-7e	75	2739
Jordan et al, Harjo 5, cel w½ e½ sw 13-17n-8e	*	1340
Fred B. Kroger, Bruce 1, se ne se 4-17n-9e	30	2052
A. B. Ice, Baker 1-A, csl se ne 14-17n-10e	8	1951
Crosbie, McKellop 1, se se sw 20-18n-9e	*	3241
Royal O&G, Berryhill 1-A, nw nw se 18-17n-11e	10	2474
GARVIN COUNTY—		
Carter, Ivy 3, ne sw sw 33-1n-3w	72	2480
JACKSON COUNTY—		
Gulf Oil, Byrd 4, sw sw nw 14-1n-20w	*	1625
Scheig, Cole 2, se sw se 34-2n-20w (otd 1462)	44	1472
JEFFERSON COUNTY—		
Palmer & Palmer, Goza 1, sw se sw 19-6s-5w	50	1542
Bridwell, Barnett 5, ne sw ne 30-6s-5w	25	1536
KAY COUNTY—		
Armes, Campbell 1, csl se sw 32-29n-1w	lcn.	abd.
LOGAN COUNTY—		
Eason Oil, Katchar No. 21, cnw sw 34-17n-4w (pb 4900)	¶4½	6272
LOVE COUNTY—		
Amerada & Stanolind, Westheimer 1-A, sw se sw 27-6s-2e	*	7363
Riddle et al, Johnson 1, csw se 20-8s-2w	*	4009
MUSKOGEE COUNTY—		
Sand Springs Home, Lather 1, csw sw 17-13n-19e	*	2008
Hanna, Robinson 1-A, se se ne 1-14n-16e	*	1574
NOBLE COUNTY—		
Tide Water Oil, Hackett 2, nw nw se 21-23n-2w	¶2¼ & 2260	4337
OKFUSKEE COUNTY—		
Manahan Oil, Bruner 1, se se se 24-10n-8e	80	1851
Stanolind, Bunner 3, ne se ne 25-10n-8e	535	1809
Bunner 4, se ne ne 25-10n-8e	492	1841
Delaney, Lewis 1, se se se 7-10n-9e (pb 1911)	35	1914
Arkansas Royalty, Parsons 2, sw sw ne 18-10n-9e	192	1900
Rodgers, Yarbraugh 2, se ne ne 18-10n-9e	96	1896
Sinclair Prairie, Shultz 1, se ne nw 18-10n-9e	75	1876
Chapman, Williams 4, ne sw nw 30-10n-9e	266	1799
Burke Greis, Scott 2, cse nw 20-10n-10e (otd 2943)	¶12	3211

New Russell Field

WELL TWO MILES FROM OIL PRODUCTION IS FLOWING

WEEKLY STAFF REPORT

Wichita.—A new field was opened in Kansas by Empire Oil & Refining Company's Vaughn 1, SWc 17-14s-14w, some five miles southwest of Russell in that county, which began showing for a producer from the Oswald lime. Top of the lime was found at 3004 feet, and the well was drilled to 3031 feet, where it made several flows over the crown block. The oil was found from 3028 feet to the total depth. Vaughn 1 is two miles from the nearest production. Although no gauges had been made of the flow, its size was indicated by the fact that the oil was flowing through eight-inch casing.

Continental Oil Company's Michekls 1, NWc SW 12-18s-8w, extended the Geneseo pool of Rice County to the north last week. Top of the Siliceous lime was found at 3201 feet, and a core taken from 3205 to 3210 feet was saturated with oil. Casing will be run and cemented before the test is drilled in. The well is about three-fourths of a mile to the northeast of Empire Oil & Refining Company's Banterton 1, SE SW SE 11-18s-8w, which was completed a week ago for 268 barrels of oil from the Siliceous lime at 3270 feet, following acidization. Company officials report the Michekls as running about 32 feet higher on top the lime than Banterton 1.

Define Warkentine Field

The southern limit of production has apparently been found in the Warkentine pool of Harvey County, as Bradley Oil Company et al's Haury 1, NWc SW 13-23s-12w, was a failure in the chat. Top of the formation was found at 2978 feet, and the well was abandoned at the total depth of 2996 feet. Good porosity was had from 2984 feet to the total depth, but neither oil nor gas was showing.

Nearby, in the Halstead pool of the same county, Western Kansas Oil & Refining Corporation et al's Haury 2, NEc 14-23s-2w, added a new producer to the area, making 60 barrels of oil in two hours from the chat at 2968 feet on a preliminary test. It was shut in for tankage when last reported. The same company was rigging up standard tools at Merwin 1, NEc SE 14-23s-2w, which is one of the farthest south tests in the pool. It found the top of the chat at 2959 feet.

Clyde Pulse et al's Payne 1, SW NW NE 4-22s-7w, four miles south of the Hauschild pool of Rice County, topped the conglomerate at 3400 feet and the chat at 3420 feet. From 3432 feet to 3440 feet, water came into the hole. It is reported the well may be completed in the lower formations. If, however, the well is found to be non-productive in the Siliceous lime, it will be plugged back to the Lansing lime at 3242 feet

Company, Well and Location	Init. Prod. Bbls.	Depth
OKLAHOMA COUNTY—		
Texas Co., State Land 1, se se ne 36-14n-4w	1082	6580
Barnsdall, Edwards 5, se se se 15-12n-3w	754	6469
Guthrie 5, nw sw se 15-12n-3w	567	6437
British American, Francis 2, sw se sw 22-12n-3w	819	6500
Southwest Petroleum, Mayfair 1, ne sw se 27-12n-3w	1589	6518
Wegener et al, University 1, sw ne se 27-12n-3w	1214	6477
Gulf Oil, Lindsey 2, se sw nw 6-13n-3w	300	6712
Frank Buttram, Winters 1, sw se nw 20-13n-3w	¶7½ & 8095	6687
Zifney 1, ne sw se 20-13n-3w	¶7½ & 5394	6738
Amerada & Stanolind, Beerschemk 1, ne ne ne 1-13n-4w	504	6611
Ohio Oil, McMillan 3, sw nw sw 31-14n-3w	¶3 & 748	6640
OSAGE COUNTY—		
Elm Oil, 7, ne se nw 17-20n-12e	*	1484
Lewis Prod. 12, ne se ne 28-24n-7e	84	2680
Lewis Prod. 4, se se se 28-24n-7e	222	2598
Carter et al, 3, ne se sw 3-25n-6e	lcn.	abd.
Carter et al, 4, se ne sw 3-25n-6e	lcn.	abd.
Carter et al, 5, nw ne sw 3-25n-6e	lcn.	abd.
Ducotey 3, sw nw se 3-25n-6e	lcn.	abd.
Ducotey 4, nw sw se 3-25n-6e	lcn.	abd.
Presbury 3, sw nw ne 10-25n-6e	lcn.	abd.
Carter et al, 5, se ne sw 10-25n-6e	lcn.	abd.
Kasishke, 9, nw se sw 15-25n-6e	lcn.	abd.
Coralena Oil, 5, sw ne nw 21-25n-6e	110	2774
Barnsdall, 5, sw se ne 35-25n-11e	17	1728
Utilities Prod., 24, nw ne sw 1-27n-7e	¶2 & 35	2544
PONTOTOC COUNTY—		
Sinclair Prairie, Wooley 16, ne ne sw 22-2n-7e	¶2½ & 3251	3775
Amerada, Smith 5, se sw nw 28-2n-7e	¶4¼ & 3358	3535
Magnolia, Smith 3, ne se nw 28-2n-7e (pb 4263)	125	4280
Smith 4, se se nw 28-2n-7e	3702	3489
Simpson 15, se ne ne 29-2n-7e	¶2¼ & 1286	3676
Great Lakes, Gilmore 6, se sw ne 29-5n-8e	7	995
Magnolia, Morin 1, se ne se 20-2n-7e (pb 4368)	964	4384
Crosbie, Burris 2-B, cwl se 22-2n-7e	3016	3709
Moore, McCarty 1, se sw ne 22-2n-7e	¶4¼ & 5168	3735
SEMINOLE COUNTY—		
Delaney, Bowles 1, sw se nw 10-6n-6e (pb 2460)	*	2595
Vierson et al, Jones "A" 7, ne nw nw 11-6n-6e (otd 2405)	7	2430
Malernee et al, Huddleston 1, nw ne nw 32-7n-6e	95	2968
Magnolia, Fee 3, ne sw sw 9-9n-7e	75	3295
Amerada et al, Klabuba 2, nw sw se 35-11n-5e	768	4645
STEPHENS COUNTY—		
Angle & Angle, Irvine 1, sw sw ne 24-1n-7w	lcn.	abd.
TULSA COUNTY—		
Sinclair Prairie, Houston 1, cse ne 14-17n-12e	lcn.	abd.

(See page 100 for completions Week ending March 6.)

*Failures; †Junked; ¶Million cu. ft. gas.

PATTERSON-BALLAGH
OIL WELL DRILLING PRODUCTS

Tested Products, designed to meet definite needs in rotary drilling. Backed by the Patterson-Ballagh warranty of satisfaction.

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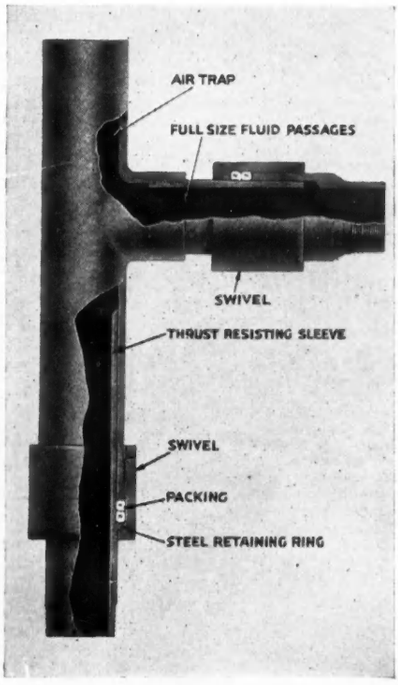

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Expander Tool

Fully Patented
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This Tool is offered exclusively by Patterson-Ballagh for use in applying Protectors. Patent has been validated.

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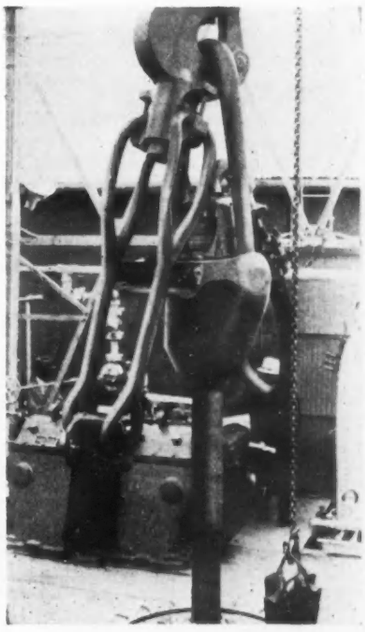

Swivel Bail Protector

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where it filled 300 feet with oil some time ago.

Barbara Oil Company's Holmes 1 C E½ SE 15-33s 13w, on the west side of the Medicine Lodge pool of Barber County, started spraying oil after drilling to 4845 feet in the Viola lime. The hole was bottomed at 4847 feet. No estimate regarding the production was made, but the gas flow was placed at 1,500,000 cubic feet. Gas is coming from the Mississippi lime between 4565 and 4581 feet.

Lario Oil & Gas Company's Morgan 1, NWc SE 23-24s-13w, southeast diagonal offset to the discovery producer in the St. John pool of Stafford County, made 2399 barrels of oil on a retest from the Siliceous lime at 4083 feet. The old potential was rated at about 2165 barrels of oil.

Stanolind Oil & Gas Company's Garvin 1, SWc NE 23-24s-13w, an east offset to the discovery producer, swabbed eight barrels of oil an hour from the Siliceous lime at 4089 feet. It was later deepened to 4102 feet, but no increase in production was noticed.

Simpson & Noble, Inc., and Atlantic Refining Company's Hiss 2, SW NW NE 31-20s-13w, in the Hiss pool of Barton County, was completed for 1701 barrels of oil from the Lansing lime at 3290 feet. Potential was for 24 hours.

Continental Oil Company's Ainsworth 1, SEc NE 33-16s-13w, the fourth test to find production in the Ainsworth pool, pumped 1202 barrels of oil natural on a 24-hour test from the Siliceous lime at 3395 feet.

Indian Territory Illuminating Oil Company's Schrepel 1, NEc 26-20s-11w, in the Peter pool of Barton County, was drilling below 3195 feet in Lansing lime. The well was making slow headway due to a badly caving hole.

Burrton Is Extended

Sinclair Prairie Oil Company's Kaufman 1, SWc SE 18-24s-4w, extended the Burrton pool of Reno County one-half mile west last week. Kaufman 1 topped the chat at 3325 feet and drilled to a total depth of 3389 feet where it flowed 1439 barrels of oil and 45 barrels of water in 24 hours.

Dickey Oil & Refining Company et al's Goering 7, SW NE SE 17-21s-1w, at the north end of the Graber pool of McPherson County, was completed for 1360 barrels of oil from the Hunton lime at 3334 feet. The flow followed acidization.

Derby Oil Company's Elizabeth Arnold 1, SWc NW 16-21s-1w, two locations north of production in the Graber pool, drilled to 3347 feet in the Hunton lime, but plugged back to 3333 feet when water was encountered. The hole was to be acidized before a test of production is made.

Frank Whan et al's Osberger 1, NEc NW 9-19s-2w, west of production in the Ritz-Canton pool of McPherson County, was dry and abandoned last week at 2450 feet. It had a hole full of water.

Patton et al's Rogers 1, SW NW SW 35-31s-2w, west of production in the Wellington pool of Sumner County, recovered a core showing some oil from between 3839 and 3842 feet. The well was drilling ahead below 3965 feet in the Mississippi lime with nothing showing. Top of the chat was found at 3817 feet; the oil showing was found after drilling deeper. A second core from 3842 to 3853 feet had no saturation.

Start New Tests

An edge well is being started about 10 miles southwest of Gueda Springs, near the Oklahoma-Kansas state line, in Sumner County. It is Sinclair Prairie Oil Company's Herrick 1, NE NW SE 15-35s-2e. The new test is also one mile south of a dry hole drilled in the area a year ago.

Several other new tests are reported from the county. The Texas Company is scheduled to make location for Harper 1, NEc SW 9-30s-3w, four miles north of Conway Springs, on a big block of acreage held by the company in that area. Empire Oil & Refining Company has staked location for Kimel 1, NWc 4-29s-2w, in the southwest part of Sedgwick County.

Lario Oil & Gas Company's Cress 1, NEc 13-11s-17w, east of production in the Bemis pool of Ellis County, topped the Siliceous lime at 3293 feet, and was bottomed at 3302½ feet, where casing was being run, preparatory to drilling in. Oil was found in the base of the Simpson formation and top of the lime.

Empire Oil & Refining Company's Fluke 1, NW NE SW 15-26s-9w, southeast of Langdon in Reno County, was completed for 2266 barrels of oil from the Viola lime at 4156 feet, following acidization. The potential flow was based on the flow of 598 barrels of oil during a six-hour period.

Shell Petroleum Corporation's Whipple 4, NEc 15-26s-9w, in the Lerado pool of Reno County, made 1131 barrels of oil in 14 hours from the Viola lime at 4146 feet.

Derby Oil Company's Grace Benjamin 1, SWc 31-20s-13w, three locations south of production in the Hiss pool of Barton County, was dry and abandoned at 3360 feet in the Lansing lime following two shots and one acid treatment. The well showed a small amount of oil before being acidized, but later made 10 bailers of water per hour.

Snowden & McSweeney's Hindman 1, CE½ NW 35-7s-17w, southeast of Stockton in Rooks County, was waiting on cement before drilling out the plug and testing a show of oil at 3118 feet in the Oswald lime. The hole was originally drilled to 3130 feet, but was plugged back to the present depth when water was encountered. An acid treatment ate out the casing at 3083 feet, and it was necessary to recement before testing could be resumed.

Carlock et al's Deweese 1, SW NW NW 32-20s-7w, west of production in the Hauschild pool of Rice County, was abandoned with a hole full of water at a total depth of 3675 feet in the Siliceous lime.

10-ACRE SPACING

Oklahoma City.—Reclassification of the North Olympic pool of Okfuskee County was granted March 5 by the Oklahoma Corporation Commission on the application of J. B. Sledge. The North Olympic pool, located in Sections 7, 8, 17 and 18-10n-9e, will be drilled according to the new spacing plan approved by the commission, i.e.: each quarter-section embraced in the area is to be divided into 16 units containing approximately 10 acres each, the well to be drilled in the approximate center of the unit.

KANSAS

Completions

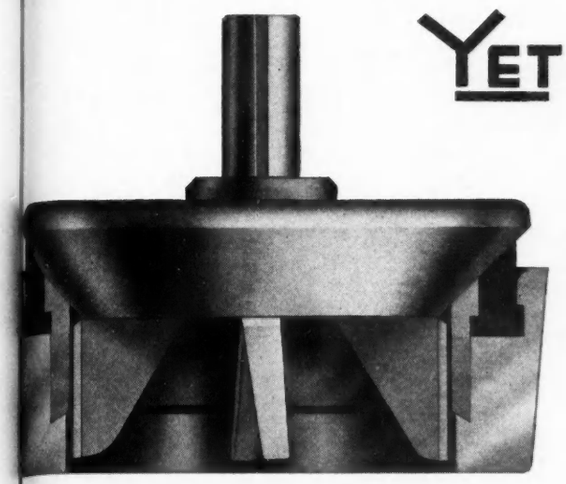
Company, Well and Location	Init. Prod. Bbls.	Depth
BARTON COUNTY—		
Stanolind, Reimann 1, sw sw nw 34-16s-13w	1624	3377
Simpson & Noble, Hiss 2, sw nw ne 31-20s-13w	1701	3290
BUTLER COUNTY—		
Saco Oil, Brainerd "B" 2, sw se sw 35-24s-3e	170	2708
Cox & McGinnis, Faulders 1, sw sw ne 27-25s-3e	*	3277
Rex & Morris, Loomis 3, cn¼ n½ ne 21-27s-4e	75	2345
DeMoss "B" 1, nw nw se 5-28s-7e	140	2746
CHAUTAUQUA COUNTY—		
Mead et al, Schafer 1, sw sw ne 23-32s-10e	250	1980
Sagamore Oil, Cunningham 1, ne ne sw 8-32s-11e	¶½	1324
Brosius Meitey et al, Morris 1, sw nw sw 6-32s-12e	*	2165
Denman Bros., Lewis 2, cne se 15-33s-12e	*	1712
COWLEY COUNTY—		
Lloyd, Frost & Study, McKinley "A" 4, sw sw ne 33-31s-3e	3084	3289
ELK COUNTY—		
Diller O&G, Keys 3, se se ne 26-31s-10e	250	2269
GREENWOOD COUNTY—		
Superior O&G, Jones 10, nw se sw 21-23s-13e	84	1702
KEARNEY COUNTY—		
Helmerich & Payne, Jones 2, cne 36-26s-35w (pb 2761)	¶2½	2815
LANE COUNTY—		
K. C. Bates, Bates-Nimocks 1, cnw ne 16-16s-28w	*	5121
McPHERSON COUNTY—		
Frank Whann et al, Osterfurg 1, ne ne nw 9-19s-2w	*	2450
RENO COUNTY—		
Shell, Reece 4, se sw sw 11-26s-9w	3780	4138
Shell, M. Whipple 4, se sw ne 15-26s-9w	2447	4146
RICE COUNTY—		
Continental, Ainsworth "A" 2, sw se nw 30-18s-7w	1023	3188
Holland et al, Callis 1, ne se sw 32-19s-9w	*	3320
Rose & Sons, Callis 1, sw se sw 32-19s-9w	350	3214
Carlock et al, Dewuse 1, sw nw nw 32-20s-7w	*	3675
Tatlock, Drew 4, sw nw sw 5-20s-10w	946	3337
Buchannon et al, Oberle 1, ne nw se 18-20s-10w	553	3310
Gulf Oil, Hirsch 1, se sw ne 18-20s-10w	1432	3297
Atlantic Oil, Scott 2, se sw se 20-20s-10w (pb 3287)	*	3307
ROOKS COUNTY—		
El Dorado Ref, Southard 1, sw sw se 1-6s-18w (pb 3080)	492	3473
Seigle et al, Westhusin 1, ne ne ne 14-9s-17w	lcn.	abd.
RUSSELL COUNTY—		
Gulf Oil, Ehrlich 6, se se nw 1-14s-15w	522	2789
Skelly, Dumler 2, se sw ne 1-14s-15w	1801	2775
Witt, Witt 3, nw ne se 3-14s-15w	1434	2565
Bridgeport, Dortland 3, cne 8-14s-15w	*	3306
Coralena Oil, C. Sellens 2, ne nw nw 29-15s-13w	*	3283
Shell, Michaelis 6, sw se ne 31-15s-13w	2396	3335
W. I. Southern, Boomhewer 3, sw sw nw 32-15s-13w	2398	3310
SCOTT COUNTY—		
Blackman et al, Nolan 1, nw nw ne 13-19s-33w	lcn.	abd.
SUMNER COUNTY—		
Stelbar, Frankum 5, sw se ne 32-31s-1w	614	3690
Rothrock 2, ne ne nw 4-32s-1w	982	3699
TREGO COUNTY—		
Central Commercial Drlg., Burkett 1, csw 15-11s-22w	*	4239
Dawson & Tharpe, Wilson 1, cne ne 22-11s-23w	*	4006
WOODSON COUNTY—		
Alexander et al, Dreyer 1, nw nw nw 25-23s-13e	*	1800

(See page 100 for completions week ending March 6).

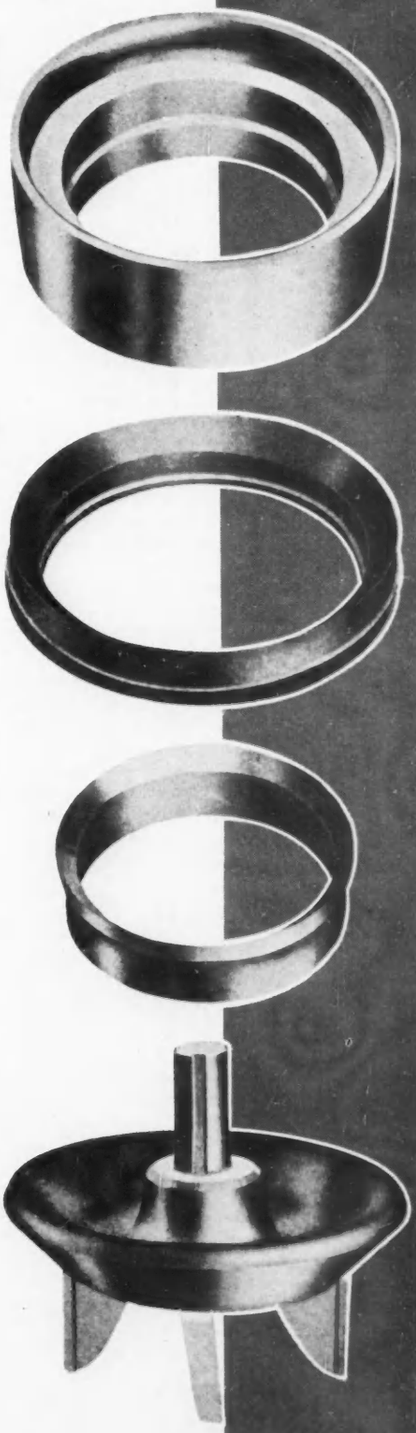
*Failures; †Junked; ¶Million cu. ft. gas.

The TWIN-SEAT VALVE

COSTS NO MORE THAN CONVENTIONAL SLUSH PUMP VALVES...



YET IT SAVES YOU 28% to 40% ON EACH REPLACEMENT



It's easy to see why slush pump owners are taking to this modern valve. The difference in maintenance costs alone is reason enough for specifying it.

Pump operators have been used to replacing the entire valve seat when wear occurred. But not with the TWIN-SEAT Valve. With it you only replace the inexpensive rubber and steel insert seats at the most. The non-corrosive, acid-resisting bronze body fits into the deck of the pump and stays there! Furthermore, wear which occurs on the rubber and steel insert seats is minimized for more than one reason:

First, this valve provides two positive leak-proof seats on the valve body inserts. The first seal is on the rubber insert, which absorbs the shock and compresses until the valve is fully seated and cushioned on both rubber and steel. This avoids pounding, and insures that the valve will give many more hours of service before any replacement becomes necessary. Next, the valve cannot seat in exactly the same place twice due to the force of fluid on the guides changing the position of travel of the valve.

And don't forget this: The TWIN-SEAT Valve costs no more than ordinary pump valves in spite of its superior features not found elsewhere!

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Plan Seven Offsets

CONTINENTAL'S MONUMENT NORTH EXTENSION IS CAUSE

WEEKLY STAFF REPORT

Hobbs, N. M.—A minor production extension given the north end of Monument field last week will result in seven progressive offsets being drilled in single order on leases lying to the north, unless failures terminate the north trend. Continental Oil Company's State 3-A-17, C NW SW 17-19s-37e, provided the key well for the revival of exploratory work, by responding to acid treatment of lime at 4028 feet, or 319 feet sub sea, with a flow of 64 barrels oil the first hour and 58 barrels the second hour through a three-fourth-inch choke. Gas volume was rated at 1,700,000 feet daily. The well made 13½ barrels per hour natural. The Texas Company's State 2-K, C NE SE 18-19s-37e, is starting up as a west offset. Lease owners to the north generally respect the center of 40-acre unit spacing, and ownership is divided in such a manner that seven normal locations will follow as each outpost is completed.

New locations in Lea County sustained a sharp decline the past week with only eight listed. This compares with 18 the previous week and 16 for the week before. New operations have exceeded the total completions nearly every week since the first of the year. The current report lists 10 oil producers and a gas well as completions.

Lea County Wildcat Flows

Jim W. Brown and Reynold's Parcell-Conoco 1, C NW SE 8-21s-38e, eastern Lea County wildcat that drilled into oil saturated lime February 10 at 4371-4373 feet, with an elevation of 3573 feet, flowed by heads after drilling out cement plugs from 5½-inch pipe cemented at 4200 feet. Tubing will be run to acidize. It is near the northwest corner of Andrews County, Texas, and about six miles northeast of nearest production in the Hardy-North Eunice field.

Magnolia Petroleum Company's State 1-G, NW NW NE 24-17s-34e, second test for the Vacuum area, filled 2500 feet with oil after 580-quart nitro shot March 4 at 4618-4772 feet. It may be acidized in an attempt to make a flowing well. State 1-G, drilled into sulphur water at 4896-4905 feet, with an elevation of 4019 feet, and plugged back to 4794 feet. Flowing production is needed to lend encouragement to continued exploratory work in the area. The company's original producer, about three-fourths of a mile to the northwest, is capable of flowing about 100 barrels daily, but lacks a market for the production.

Two Lime Belt Extensions Loom

The north trend of production for the sandy-lime belt in eastern Lea County offers two prospective extension wells that have recorded small gas showings in the upper lime. The Texas Company and Illinois Oil Company's J. P. Alexander 1, Lot 14, 5-21s-37e, about 1¾ miles northeast of nearest production, was idle at 3535 feet after logging a gas show at 3140-50 feet, with an elevation of 3490 feet. Continental Oil Company et al's J. M. Skaggs 1, C NE SE 24-20s-374, about three miles northwest of the above test and 3½ miles east of Monument field, showed little gas when formation tester was used at 3653-3703 feet, and was drilling at 3721 feet. It is about 1⅞ miles northeast of a completed gasser.

Northeast Eunice Erratic

The northeast edge of the Eunice lime area is proving erratic as a source of production. Several recent completions fail to yield their proration allowables, and are showing considerable cut oil. Repollo Oil Company's State 2-196, SW NW SW 32-20s-37e, is a new addition to the list of exceptions, having flowed 44 barrels fluid, 2.8 percent bs & w, in 12 hours after using 3000 gallons of acid in lime at 3861 feet, or 315 feet sub sea. Amerada Petroleum Corporation's State 2-W, C SW NE 30-20s-37e, has been completed flowing 95 barrels fluid, 50 percent oil, at 3888 feet, or 350 feet below sea level. It was treated twice with acid at 3850 feet, and three times at 3888 feet, using a total of 16,000 gallons of solution. The company's east offset made a flowing well at 303 feet sub sea.

Continental Oil Company et al's M. Lockhart 4-A-30, SE SW NE 30-21s-36e, north offset to recent large oil producer completed on the southwest edge of Eunice field by The Texas Company's Rector 3, is preparing to start up. The former company completed State 4-D-11, C NE SW 11-21s-36e, flowing 16½ barrels of 33 gravity oil per hour natural through a three-fourth-inch choke from lime at 3793-3890 feet. Gulf Oil Corporation's Mollie Campbell 3, C SW SW 7-21s-36e, is a new operation, and Mid-Continent Petroleum Corporation is starting work on Boren 1, C NE NE 20-22s-36e. In the South Eunice sandy-lime area, The Texas Company's C. P. Falby 1, C NE NW 8-22s-37e, offsets a completion made some months previous. Amerada Petroleum Corporation has resumed operations in Cooper field with the awarding of drilling contract for J. L. Isbell 3, C SW NE 15-24s-36e, offsetting production.

Amerada Gets Large Well

Tide Water Associated Oil Company's State 2-1, C NE SW 16-20s-37e, east edge location for Monument field, tested 25 barrels per hour natural from lime at 3860 feet, or 322 feet sub sea, with packer on tubing at 3845 feet, but is showing a little water. Packer will be reset to try for a water shutoff, since water is believed to be coming from above the oil zone. Amerada Petroleum Corporation's Anderson 2, C SE SW 8-20s-37e, proved to be one of the largest completions for the week, having averaged 114 barrels per hour for 4½ hours through 45/64-inch choke from lime at 3860 feet. The flow increased from 98 barrels the first hour to 125 barrels the last hour. Elmer Boeseke et al's Wulff 2, SE SW NW 17-20s-37e, and Gulf Oil Corporation's State-Orcutt 1-D, C NW NE 13-20s-36e, were listed as new locations the past week for the Monument area. Repollo Oil Company's W. P. Byrd 3, SE NE SW 11-20s-36e, gauged 206 barrels oil in 4 hours after using 2000 gallons of acid at 3890 feet.

NEW MEXICO

Completions

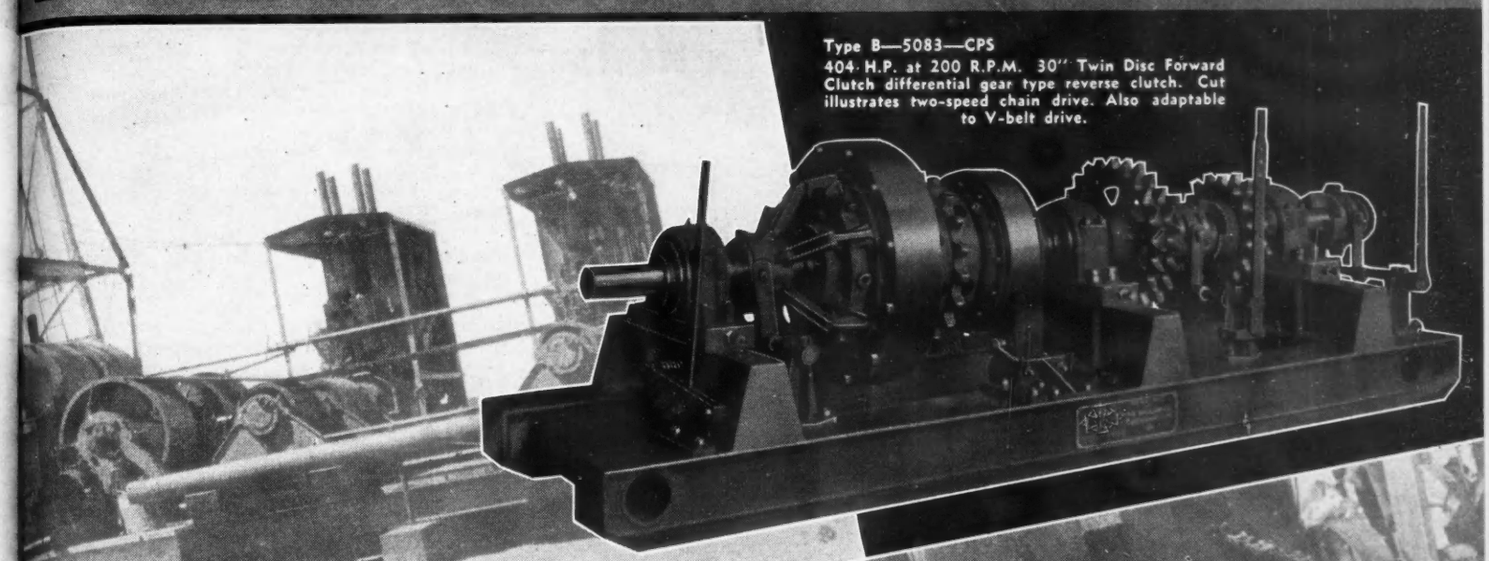
Company, Well and Location	Init. Prod. Bbls.	Depth
LEA COUNTY (Eunice Field)—		
Amerada, State 2-W, c sw ne 30-20s-37e	90	3888
Continental et al, State 4-D-11, c ne sw 11-21s-36e	750	3890
Shell, State 1-M, lot 8, 1-21s-35e	1100	3847
LEA COUNTY (Cooper Field)—		
Shell, W. B. Guthrie 1, c sw se 34-23s-36e	¶24	3928
LEA COUNTY (East Jal Field)—		
Tide Water Associated, Coates 1-B, c nw nw 21-25s-37e	32	3077
LEA COUNTY (Monument Field)—		
Amerada, Anderson 2, c se sw 8-20s-37e	4000	3860
Continental, State 3-A-17	2500	4028
Conoco et al, H. M. Britt 2-B-18, c se nw 18-20s-37e	1000	3880
Gulf, State-Kutter 2-A, c nw se 20-19s-37e	60	4002
Weir 1-B, c nw se 26-19s-36e	100	3995
Repollo, W. P. Byrd 3, se ne sw 11-20s-37e	1500	3890

*Failures; †Junked; ¶Million cu. ft. gas.

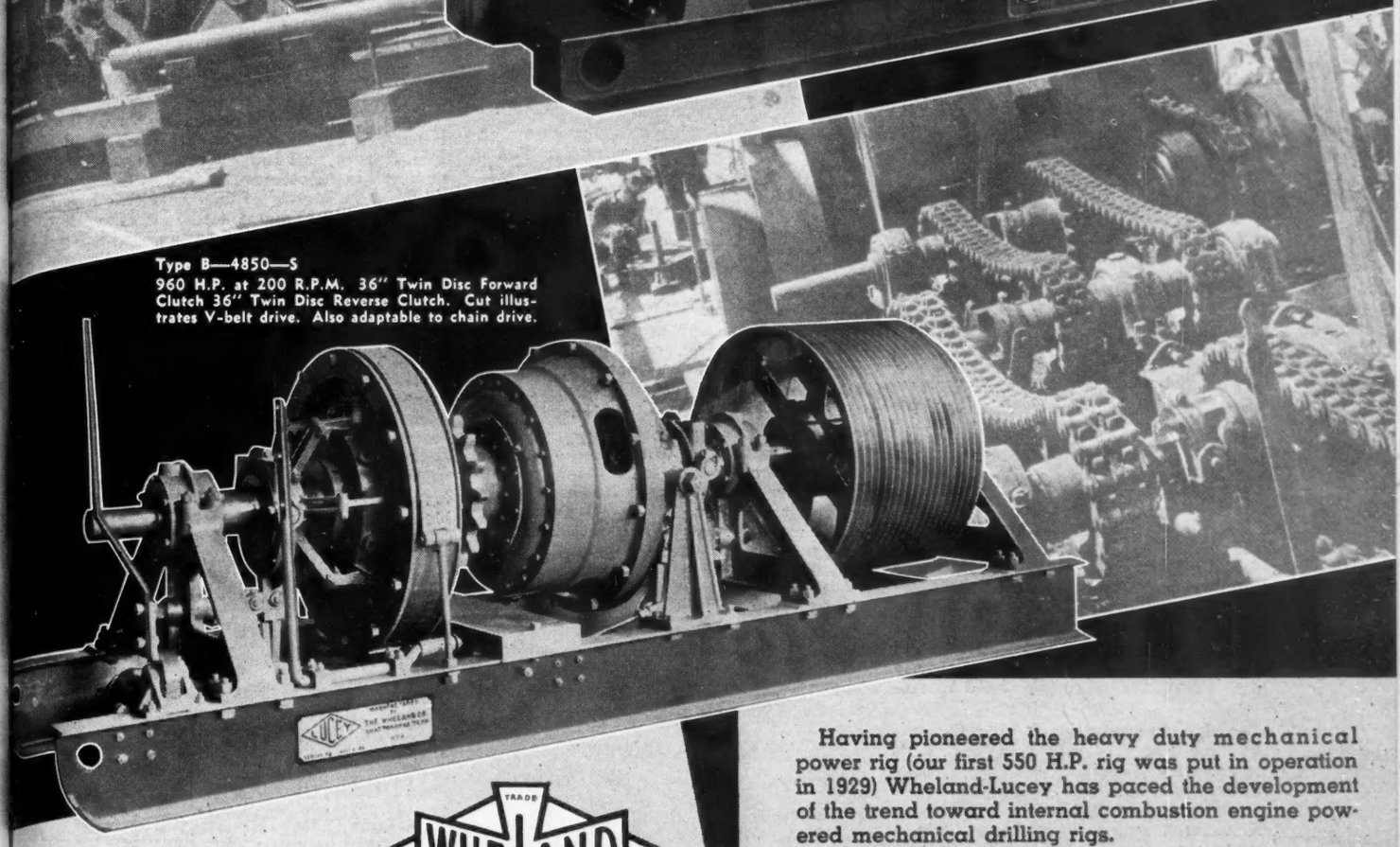
DISCUSS VESSELS

Tulsa.—A combined meeting of the Mid-Continent Petroleum Safety Council, the Engineers Club of Tulsa and the American Society of Mechanical Engineers, held here March 12 was devoted to a discusion of proper design and safe operation of pressure vessels in the oil fields and refineries. Speakers included Dr. T. McLean Jasper, A. O. Smith Corporation, Milwaukee, Wisconsin; and G. Raymond, Black, Sivalls and Bryson, Oklahoma City.

HEAVY DUTY *Reverse Clutches for Rotary Drilling*



Type B—5083—CPS
404 H.P. at 200 R.P.M. 30" Twin Disc Forward Clutch differential gear type reverse clutch. Cut illustrates two-speed chain drive. Also adaptable to V-belt drive.



Type B—4850—S
960 H.P. at 200 R.P.M. 36" Twin Disc Forward Clutch 36" Twin Disc Reverse Clutch. Cut illustrates V-belt drive. Also adaptable to chain drive.

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Wheland-Lucey Reverse Clutches are built in the two types illustrated, and include many features so necessary to efficient trouble-free operation. Three heavy duty roller bearings are mounted on sturdy pedestals, eliminating dangerous overhanging drives. Large Twin Disc Clutches assure smooth, trouble-free reserving action. Sturdy, well designed rigging insures ease of operation, while extra heavy skids afford easy handling.

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THE WHELAND COMPANY

ROTARY DRILLING EQUIPMENT

Chattanooga, Tenn.

Wildcats Boom

PROSPECTIVE ACREAGE IS SCARCER; PRICES RISING

WEEKLY STAFF REPORT

Midland, Texas.—Demand for wildcat lease blocks supported by favorable geological or geophysical reports and acreage along recognized production trends throughout West Texas exceeds current offerings by a wide margin. Big drive has been underway for some months for additional prospective crude reserves in the district. Companies and operators are stepping up cash bids for acreage, and in many instances are assuming drilling obligations. This competition is making it difficult for the veteran wildcatters to obtain free leases in return for the drilling of a test, which must be financed through sale of lease protection to others.

Possibilities are that the district will record more wildcat drilling during the remainder of this year than at any period within the past decade. Bulk of this activity will center upon the north portion of the Permian Basin, with the Deleware Basin, centering west of the main oil-producing district, gradually commanding more attention as investment opportunities decline in the currently popular wildcatting sector.

Fields More Active

Established fields are showing substantial gains in drilling operations, and the volume of work may be limited by the availability of rotary rigs to perform the work. An ample number of standard rigs and machines are on hand to meet the demand in areas using cable tools. Great number of rotary rigs from East Texas and Oklahoma have been moved into West Texas, and more are slated to follow.

Search for production in the Ordovician lime series is rather limited, with tests currently underway in Crane, Crockett, Brewster and Pecos Counties. Ohio Oil Company's M. H. Goode 1, projected Ordovician test for northeastern Terrell County, was ordered abandoned early last week in black shale and sand at 9140 feet. It originally was completed in 1931 as a small gasser in Pennsylvanian at 6120 feet by Transcontinental Oil Company, and was still showing gas when deepening operations began last September.

Failure for the north portion of the Permian Basin was apparent the past week when W. L. Pickens et al's J. B. Lewright 1, near south line of Terry County, drilled into sulphur water in lime at 4938-4971 feet. It was contracted to drill to 5500 feet, and centered upon a block of 5200 acres. Top of water horizon was found at 1753 feet sub-sea. Ray Albaugh et al's Robinson 1, a small pumper 10½ miles southeast, did not encounter bottom-hole water in completing at 5038 feet, or 1953 feet sub-sea. However, the tests are on separate geological features. The Texas Company et al's Bob Slaughter 1, southwestern Hockley County, is the next completion due among the wildcats in the upper basin, having drilled to 4643 feet, where it was logging brown lime, with an elevation of 3560 feet.

Largest Producer

Rated as the largest oil producer in the north portion of the Permian Basin, Texas Pacific Coal & Oil Company's L. P. Bennett 1, second completion for Yoakum County single oil area, gauged 440 barrels of oil in 12 hours after 380-quart shot at 5090-5275 feet, and was due to acidize late last week. It originally was completed in lime at 5183-5236 feet last January, flowing 571¾ barrels potential after acid, and was deepened to sulphur water at 5305 feet, or 1746 feet below sea level. Shut off was obtained in plugging back to 5280 feet.

Surface pipe was landed the past week on Shell Petroleum Corporation's M. J. Mann 1, east offset to the discovery producer of the Seminole area, Gaines County. Water wells have been started by Magnolia Petroleum Company to proceed with the drilling of M. E. Taylor 1, northeastern Yoakum County. Operations are due to start shortly on the southeastern Bailey County 5500-foot test contracted by Ernest L. Wilson et al in return for 14,000-acre solid block obtained from the Yellowhouse Land Company. Location is 660 feet out of NEc Labor 4, League 700, State Capitol Lands, 28 miles north of nearest production in Cochran County.

Cochran County

Cochran County is in line to receive a number of wildcat projects within a few months. R. S. Bond, L. C. Harrison and E. E. Fogelson, Dallas, have moved in equipment to drill Wm. Cameron et al 1, near center of east line Labor 1, League 85, Greer County School Lands, 7 miles southeast of Morton. It is contracted to 5500 feet, and is on a 10,600-acre block, which adjoins on the west an 18,500-acre block obtained last year by the same parties from the Slaughter Estate. The latter block was purchased for $1 per acre bonus, with 50 cents rental, for 10-year lease.

The Slaughter Ranch in Cochran County is a popular wildcat area due to good oil showings logged by failures drilled by Humble Oil & Refining Company, Marland Oil Company and Continental Oil Company in Armstrong and Carson school land surveys. Magnolia Petroleum Company paid $27,135 cash bonus for 10-year lease, with 50-cent rental, on 1904 acres in Martin County School Lands, Section 58, 3 miles north of a flowing well on the Duggan ranch. The Texas Company recently assumed a 90-day drilling obligation for lease on 11,000 acres at $2.50 per acre bonus. This block centers upon Leagues 130 and 131, Carson County School lands. Pete N. Wiggins, Jr., Dallas, and associates have until March 20 to exercise option taken on 8000-acre block, centering upon Leagues 91 and 92, Lipscomb County School Lands, and League 93, Mills County School Lands, for $80,000 cash in addition to a drilling obligation. Same parties have optioned an adjoining block from the Slaughter Estate, aggregating 7800-acres, for 10-year commercial lease at $10 per acre cash bonus.

Two additional wildcat projects for Gaines County are in prospect. Amon G. Carter et al, have assembled a drilling block 4 miles southeast of Seagraves, near the northeast corner of Block G, W. T. Ry. Survey. R. H. Gill and others assumed 5000-foot drilling obligation in acquiring a 4300-acre block that centers upon Section 7, Block C-44, P. S. L. Survey, 4 miles southeast of Seminole.

Shell Petroleum Corporation's E. F. King 1, C SE SE Section 10, Block A-42 PSL Survey, and 1 mile west of a wildcat pumper in southern Andrews County, swabbed 96 barrels of 27.9 gravity oil in 13 hours from lime at 4450-70 feet, with an elevation of 3200 feet, and will be deepened. Top of pay was logged about 30 feet lower sub-sea than Humble Oil & Refining Company's Walker 1, nearest producer.

Harry Adams, Bradley et al's W. P. Edwards-Shell 5, third test for the north extension of the Leck field, Winkler County, missed the main body of lime saturation in logging oil show at 3012-22 feet, and sulphur water at 3186-88 feet. It has been plugged back to 3182 feet to acidize. Located at SW NW SE Section 6, Block C-23, it is an east offset to Sun Oil Company's Edwards 1-B, which made 59.3 barrels potential after nitro shot at 3175 feet, or 254 feet sub-sea.

Atlantic Refining Company has lately become one of the most active drilling units in West Texas, having a score of rigs running in Ector, Ward and Winkler Counties.

OIL FILLS HOLE

Hutchinson wildcat shows in dolomite lime

Borger, Texas.—Stansylvania Oil & Gas Company's C. B. Lasater 1, semi-wildcat in west central Hutchinson County, developed 2000 feet of oil in the hole while drilling in dolomite lime at 3240 feet. It is in the southeast corner of the north 320-acres of Section 27, Block M-23, T. C. Ry. Survey, about 1¼ miles northwest of nearest production in the Stinnett area. First saturation was logged at 3175-3184 feet, and the test recorded increase in fluid level from lime at 3190 feet, with an elevation of 3305 feet. It is about 50 feet higher on structure than Shell Petroleum Corporation's Belle Wisdom 1, which was completed last September pumping 621 barrels initial at 3187 feet.

WILDCAT SHOWING

Test in distillate area near Graham sprays oil

Wichita Falls, Texas.—Rathke Oil Company, Wichita Falls, et al's C. W. Johnson 2, second test for the prolific gas and distillate area uncovered early in January about 2½ miles southeast of Graham, Young County, is showing for an oil producer in Marble Falls sand topped at 4229 feet, or 3093 feet sub sea, and drilled to 4231 feet. The well sprayed oil, and was shut in without a production test. It is about one mile southwest of A. R. Eppenauer et al's Eddleman 1, SEc Section 1, T & N O Ry. Survey, which was completed in sand at 4209-4243 feet, with an elevation of 1171 feet, rated at 40,000,000 feet of gas and 250 barrels of distillate daily.

The preliminary showing made by Johnson 2 indicates that the new area will yield commercial production and that the structure may involve a large area. Eppenauer et al hold lease on about 4000 acres, while Rathke Oil Company, in association with Dalport Oil Corporation and H. L. Graham, has lease on 1500 acres adjoining the discovery block on the west.

Texaco Gets Big Well

Rated as one of the largest producers in Western Foard County field, The Texas Company's Les K. Johnson 11, near SE NE NW Section 37, Block L, S. P. Ry. Survey, gauged 1244 barrels of 46.6 gravity oil in 18 hours after using 2000 gallons of acid solution in Canyon lime at 3654-3662½ feet. Gauge was taken through tubing, with 350 pounds tubing pressure and 750 pounds on casing. Gas volume was estimated at 1,212,000 feet daily. This well extends the production area about 2500 feet east on the company's 9723-acre leasehold.

In Grayson County, Olson Drilling Company et al's D. R. Utiger 1, Preston Anticline wildcat, was drilling at 4755 feet, according to late reports.

404 TEXAS PERMITS

Austin.—The Railroad Commission approved last week permits for drilling 404 new wells in Texas, 77 less than were allowed the week before. Approval of a large number of exceptions accounted for the unusually large volume in two consecutive weeks.

East Texas operators have obtained permits for 91 wells, including 39 in Gregg County, 31 in Upshur County, 16 in Rusk County, four in Smith County, and one in Cherokee County. There were 27 locations reported for wells in the rest of the East Central Texas district.

TEXAS PANHANDLE

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
Stanolind, L. C. McConnell 4	301	3290
The Texas Co., E. Cooper 3	416	3163
GRAY COUNTY—		
British-American O. P. Co., J. L. Phillips 11	739	3300
Cosmos Oil Co., Tom Catlin 3	665	3227
Magnolia, John Haggard 10	620	3324
HUTCHINSON COUNTY—		
Fred E. Devore & Fischer, Starnes 1	595	3115
Gulf & Panhandle Ref. Co., C. L. Dial-Perkins 67	503	3120
H. E. Rogers et al, Moore-Langdon 1	412	3130
WHEELER COUNTY—		
Dyck Oil Co.-M. J. Delaney, Inc., G. W. Sitter 5	36	2542
B. Johnson & Sons, J. W. Stauffer 1	¶20	1745

*Failures; †Junked; ¶Million cu. ft. gas.

NORTH TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
Golding & Cochran, H. E. Brown 12, sec 6	156	1191
M. J. Kunkle 9	*	1250
Eldon E. James et al, B. C. Andrews 2	*	1010
Petroleum Producers Co., Mrs. N. I. Andrews 1, blk 11	8	1003
R. P. Griffith 1-A, sec 7	*	1319
Rathke Oil Co., G. P. Meade 5, blk 40	5	1441
E. J. Stump et al, L. F. Wilson 1-B, sec 1	*	3801
Stella White et al, fee 1, sec 41	*	1605
White & Duncan, J. M. Inman 2	*	700
CLAY COUNTY—		
Geo. T. Morris et al, J. P. Boddy 1	*	1518
COOKE COUNTY—		
Anderson-Kerr Pet. Co., R. S. Rose 5	110	1966
Phillip B. Berry et al, F. C. Owen 3	*	1963
Wm. D. Compton et al, P.-Tucker 1, blk 24	*	1215
Hester Oil Co., R. W. Trew 1	25	1244
B. H. Hilburn et al, W. A. Harris 1	*	1852
Mack Oil Co., C. F. Felderhoff 3	10	689
Schermerhorn Oil Corp., F. J. Hess 8	23	880
Whitfield et al, F. C. Owen 6	45	1960
JACK COUNTY—		
Bennett Pet. Corp., W. J. Chambers 6	600	2998
D. C. Clayton 2	800	3010
D. C. Clayton 5	508	3035
Gwynn & Overby, W. B. Lowe 6	56	3014
Thos. D. Humphrey, M. B. Cook 2	339	3002
Mullendore, Berry & Berry, W. J. Chambers 3	20	3376
W. J. Chambers 4	*	3150
O. J. Perren et al, J. R. Clayton 3	460	3005
Joe Rogers et al, J. E. Moore 1	*	555
Royal Pet. Corp., J. A. Raley 1	328	3258
Stroube & Stroube, C. C. Chambers 1	*	3087
MONTAGUE COUNTY—		
Conoco, N. J. Howard 32	30	988
N. J. Howard 21-A	7	1398
Gulf Oil Corp., W. W. Jones 7-B	95	828
THROCKMORTON COUNTY—		
Canyon O&G Co., L. D. Lilley 5	*	353
WICHITA COUNTY—		
L. T. Burns et al, Waggoner Bros. 15, blk 15	8	1751
Conoco, T. J. & J. L. Waggoner 17-C	93	1491
Humble, A. K. Norman-Reed 1 sec 25	*	697
King Oil Co., C. A. Allingham 1, sec 32	*	1930
Waggoner Est. 14-H	224	1958
Pace Pet. Co., A. B. Edgerly 6-A, sec 1	*	2004
Waggoner Ref. Co., Waggoner Est. 14-AA, sec 13	150	1954
WILBARGER COUNTY—		
Barkley & Meadows, Waggoner Est. 21-C, sec 5	20	1117
YOUNG COUNTY—		
Cable Oil Co., S. E. Snider 33	4	583
H. C. Donohoo et al, C. E. Graham 1, sec 3401	*	924
Clara Mae Douglas et al, Nora Finch 11, sec 40	15	660
Duncan, Holt & Marchman, Benson 18, sec 1391	*	930
J. J. Eagan et al, J. G. Yates 1	*	507
L. E. Mitchell et al, T. L. Oliver 1, sec 1941	*	714
Rathtke Oil Co., C. E. Graham 12, sec 3401	25	909
E. C. Reed et al, S. Bagley 1	*	601
E. E. Reynolds et al, W. R. Drum 1	*	625
Worth Oil Co., F. M. Cullers 18, blk 19	2	546

*Failures; †Junked; ¶Million cu. ft. gas.

WEST TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ANDREWS COUNTY (Means Field)—		
Humble, J. S. Means 15	500	4528
CRANE COUNTY (McCamey Field)—		
John Hertz et al, E. S. Hughes 1-A	*	2406
ECTOR COUNTY (Goldsmith Field)—		
Atlantic Ref. Co., TP Land Trust 1-C	2068	4250
Landreth Prod. Corp., C. Scharbauer 1-D	2044	4228
ECTOR COUNTY (North Cowden Field)—		
A. R. Eppenauer et al, TP Land Trust 1-C	341	4251
FISHER COUNTY—		
Gen'l Crude Oil Co., B. F. Willingham 7	70	3149
GLASSCOCK COUNTY—		
Shell, L. S. McDowell 1	*	3282
HOWARD COUNTY—		
Ward Oil Co., Dora Roberts 6-A	1400	2947
JONES COUNTY—		
H. D. Egger & C. W. Snoddy, O. Roberts 1	*	2302
F. A. Oyster & R. Griffith, T. H. Bumpass 1	*	2635
C. W. & W. L. Snoddy et al, H. C. Harvey 1	13	1635
PECOS COUNTY (Torborg Field)—		
Cardinal Oil Co., Tippett-Kirby 45-E	18	497
Paul Childress, Tr., Smith-Sinco 15	54	370
PECOS COUNTY (Wildcat)—		
Trans-Pecos Oil Co., F. W. Popham 1	†	1700
PECOS COUNTY (Yates Field)—		
Cardinal Oil Co., J. H. Tippett 1-L	150	1340
Ohio Oil Co., I. G. Yates 14-A	6648	1449
TAYLOR COUNTY—		
Superior O&G Co.-W. J. Millard, Cook 1	*	4227
TERRELL COUNTY—		
Ohio Oil Co., M. H. Goode 1, (dd)	*	9140
UPTON COUNTY (McCamey Field)—		
Homestead O&G Co., M. C. Powell-Pure 5	568	2737
Humble, A. A. Reese 5	50	2648
D. L. Hunter et al, J. W. Robbins 2	750	2217
WARD COUNTY—		
Abell Bros. et al, R. O. Potts-Humble 7	341	2330
Gulf Oil Corp., E. W. Estes 12	¶15.9	2390
Pat Hill et al, E. H. Clements-Sun 10	252	2315
Humble, University 8-F	759	2735
Lindsay Drl. Co. & Bolin, Hardage-Wilson 3-A	113	2480
Prince Bros. Drl. Co., Hall-Roberts 3-C	295	2525
Richardson Oils, Inc., Hathaway 20	5472	2605
Tide Water Associated, W. D. Johnson 4	4233	2662
W. D. Johnson 10	4320	2655
Turman Oil Co., Sloan-Shell 7-B	246	2545
Wahlenmaier Pet. Corp., R. O. Potts-Humble 10	473	2375
WINKLER COUNTY (Emperor Field)—		
Weaver & Hoffman-Page Co., Tobe Morton 2	25	2890
WINKLER COUNTY (Henderson Field)—		
Humble, Walton 12-C	3000	3053
Sinclair Prairie, Fred Leck 8-A	3600	3090
WINKLER COUNTY (Keystone Field)—		
The Falcon Co., McCutcheon-Humble 12	393	3522
WINKLER COUNTY (Kermit-Sayre Field)—		
Atlantic Ref. Co., J. C. Lovett 2	789	3116
Gulf Oil Corp., Oscar Clapp 6	254	3120
Daugherty 21	708	3000
Daugherty 23	1180	3000
Daugherty 24	1292	3020
Humble, N. R. Colby 7-C	763	3100
J. F. Howe 22	1537	3010
Magnolia, N. R. Colby 8	221	3138
State-Walton 5	362	2919
Walton 60	854	2996
Walton 62	904	2965
Walton 63	877	2975
Monday Oil Co.-Bert Fields, Abilene State Bank-Conoco 11	1278	3000
Shell, Mrs. Ida Hendrick 5-L	1397	3112
Sinclair Prairie, Walton 14-B	1133	2975
Walton 14-C	1364	2985
Siosi Oil Corp., J. C. Lovett 7	519	3076
Sun Oil Co., Daugherty 2	664	2946

*Failures; †Junked; ¶Million cu. ft. gas.

Three Tests Quit

TRINITY SEARCH ENDS IN PLUGGING ORDERS

WEEKLY STAFF REPORT

Tyler, Texas.—Search for production in the lower Trinity series by wildcats in the East Texas Woodbine belt has yielded negative results in three more tests. Plugging orders were issued the past week for Superior Oil Company of California et al's P. D. Paul 1, southeastern Hunt County, after fulfilling contract depth at 6501 feet. Situated on the Mexia-Talco fault plane, this wildcat did not log oil or gas showings in drilling through the Paluxy and first Glen Rose lime, and penetrated more than 1000 feet of the lower Glen Rose series. Base of massive anhydrite was logged at 5450 feet, with an elevation of 489 feet. In eastern Rains County, Humble Oil & Refining Company's Easter 1 abandoned at 8482 feet in lower Glen Rose or Travis Peak section. Company-owned rotary used in drilling the latter has been moved to Van field to drill L. K. Riggs 1, situated on northeast rim of the structure.

Logging of salt water and absence of a good body of lime in the lower Glen Rose section of the Trinity by J. Z. Werby et al's Williams-Strutton 1, located on the Mexia-Talco fault trend and 2¼ miles east of nearest Paluxy sand production in the Talco field, Titus County, materially lessens the prospects of production in the lower Glen Rose prevailing in the latter field. Werby et al's test was drilling at 5915 feet, and cored salt water sand above this level. Base of massive anhydrite was logged at 5676 feet, with an elevation of 341 feet. Contract calls for a depth of 6200 feet. It failed to make a producer in the Paluxy zone when drilled to 4510 feet last July by Stroube & Stroube. Although this lower Trinity test does not condemn the zone for production in the field proper, the presence of shale and Red Beds to a high degree in the lower Glen Rose tends to discount the deeper production outlook. Inferior lime conditions also prevailed in J. P. Flanagan et al's J. McGill 1, H. C. Riggs Survey, 9 miles north of Mount Pleasant, and it was abandoned in December, 1931, at 7193 feet.

Belief has prevailed generally that Talco field would eventually yield a lower producing horizon comparable to the pay zone at Rodessa in the Trinity series. Operators have retained leases, instead of attempting to make farmouts, with hopes of profiting from deeper production. The Paluxy zone affords small profits when compared to other fields, with a dual handicap of low price posting and an off-brand grade of crude that is accompanied by a high percentage of water.

Production at Talco reflected the March 1 proration quota increase of individual wells to 95 barrels daily during the week ending March 8 when the field averaged 21,083 barrels daily from 233 wells. Tank car shipments and crude movement through the single trunk line outlet combined are less than the output. The excess is being diverted to steel tanks and pits, with the latter catching untreated crude.

Operations in the Sulphur Bluff field, Hopkins County, have registered a sharp gain. Some of the leases have accumulated back allowable, but relief on the market situation is due before the end of the current month as result of Big State Oil Corporation having started work on an 8-mile 8-inch line to car rack on Cotton Belt Railroad at Saltillo.

SECOND TEST SHOWS

Grapeland area also has a failure, however

Palestine, Texas.—Recovery of sand cores carrying odor of distillate with gas from Woodbine section at 6018-6059 feet by American Liberty Oil Company et al's J. A. Bean 1, second test for the Grapeland structure, northern Houston County, assures a ½-mile southwest extension for the producing area. Preparations were underway late last week to cement a string of casing to complete, although a formation tester may be used to determine if the well will yield oil with gas. It is about level on structure with the discovery well completed last July by E. A. Ellison, Paul L. McBride, Lawrence Haberle and Thornton on the J. E. Bean 40-acre lease, Eli Steadman Survey, making large volume of gas with distillate at 6025-6037 feet, with an elevation of 482 feet. The new test logged Austin chalk at 5614-5938 feet, with an elevation of 489 feet.

TO OPPOSE BILL

Cutting East Texas marginal wells

Longview.—East Texas Independent Petroleum Association has been formed by producers and royalty owners in East Texas field primarily to oppose pending state legislation designed to alter the marginal well law so the railroad commission can lower the allowable of those wells. Wells subject to proration and within the depth classification of those in the East Texas field have a marginal allottment of 20 barrels daily. Current records of the commission list 16,780 of the 22,276 producing wells in this field as marginal wells, with an additional 50 wells inactive.

M. T. Flanagan, Longview operator, was elected president of the new organization; Sam Ross, Kilgore royalty owner, vice-president, and John J. Thomas, superintendent for East Texas Refining Company, Longview, secretary-treasurer. The following regional vice-presidents were nominated: Bryan W. Payne, Tyler; Ben Phillips, Gladewater; John Alford, Henderson; Walter Moore, Overton; and H. P. McGaughey, Gilmer.

START LINE WORK

Building 8-inch carrier out of Sulphur Bluff

Talco, Texas.—Big State Oil Corporation, Houston, has started construction of an 8-mile, 8-inch crude line to extend from Sulphur Bluff field, Hopkins County, to tank car rack site on the Cotton Belt Railroad near Saltillo. The oil will be shipped by rail to refineries at Houston and other points on the Texas Coast.

Big State Oil Corporation holds 50 percent working interest with Walter L. Goldston in the H. J. Smith 450-acre lease with 4 completed wells in the Paluxy sand. It also has contracted to purchase crude from other properties in Sulphur Bluff field. The company has been moving crude runs through American Liberty Pipe Line Company's 6-inch carrier to Talco in reaching a market.

Talco Pipe Line Company, Dallas, plans to enlarge its pipe line capacity from Talco field to a tank car rack and tank farm on the Cotton Belt Railroad at Mount Pleasant by adding 8-inch loops to its 15-mile, 5½-inch carrier. The latter line does not afford ample capacity in cold weather, although it is equipped with a heater at the field station and a second heating unit about 5 miles south of the field.

EAST TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Davis & Hart, W. B. Perry 1-C (80-ac)	1200	3631
R. H. Dearing & Son, A. P. Finney 12 (39.7-ac)	240	3688
Gulf Oil Corp., Keeling 8-A (53-ac)	7000	3815
Humble, J. E. Wheelis 21 (168.3-ac)	6500	3760
J. E. Wheelis 22 (168.3-ac)	6000	3758
Hunt Oil Co., C. D. Ashby 15-B (99-ac)	168	3600
Sue Hale 12-B (71.45-ac)	150	3667
P. G. Lake, Inc., V. E. Reid 16 (120.1-ac)	186	3584
Sinclair Prairie, G. Patterson 11 (164.33-ac)	3000	3673
Stanolind, B. Schuyler 5-A (50-ac)	240	3697
Sun Oil Co., J. P. Seale 7 (199.32-ac)	500	3686
J. S. Wheelis Oil Corp., I. J. Smith-Gulf 15 (92.2-ac)	4000	3695
KILGORE AREA—		
Barnsdall Oil Co., J. Douglas-Shell 15 (137.93-ac)	750	3657

Company, Well and Location	Init. Prod. Bbls.	Depth
E. Constantin & Co., W. D. Tucker 10 (296-ac)	80	3666
Geier Bros. & F. B. Jackson, W. G. Williamson 4 (220-ac)	3500	3708
Gralenor Oil Co., A. A. King 14 (78.33-ac)	2500	3677
Gulf Oil Corp., S. Hilburn 94 (274.32-ac)	5000	3522
H. & F. Corp.-Carl Schweers, W. P. Crews 11 (69-ac)	240	3734
Humble, Dora Thomas 19 (59.05-ac)	4000	3608
Karona Oil Co., J. N. Peterson 7 (35-ac)	4000	3627
Magnolia, Grif Davis 10 (25-ac)	8800	3644
John Radford 34 (252-ac)	7200	3646
Shell, J. B. Watson 62 (385.2-ac)	8800	3628
Sun Oil Co., C. H. Hilburn-Loyd 26 (133.7-ac)	2500	3668
Sun-Seaboard Oil Corp., M. T. Cole 42 (266.17-ac)	10,400	3540
Tide Water Associated, F. L. Buntyn 4-B (82.47-ac)	8500	3654
Weaver-Crim Corp., D. M. Peterson 10 (60.04-ac)	10,000	3625
LONGVIEW AREA—		
Amerada Pet. Corp., L. R. Hearn 13 (108-ac)	6200	3536
Arkansas F. O. Co., S. G. Smith 10-A (60.15-ac)	9500	3509
Atlantic Ref. Co., W. R. Nicholson 14-A (94.6-ac)	3600	3736
S. G. Smith 4 (27.96-ac)	10,000	3543
Day & Co., B. Victory 9 (40.2-ac)	2000	3643
Gilcrease Oil Co., J. W. Free 8 (39.95-ac)	7200	3616
Gulf, J. C. Judge 80 (518.3-ac)	8500	3503
Thos. D. Humphrey et al, F. P. Branson 1-A	*	3651
Roger Lacy et al, J. H. Alexander 1, (2-ac)	2500	3565
Magnolia, L. K. Cone 2 (100-ac)	*	3761
Bobby Manziel et al, E. L. Gillespie 1-B	1200	3696
P. H. Pewitt et al, T. J. Kirk 3 (34-ac)	480	3752
Shell, J. W. Akin 16 (100-ac)	10,000	3612
Southland Drl. Co.-United E&W Oil Co., O'Byrne 44 (304-ac)	1500	3684
Stanolind, J. F. Flemister 15 (60-ac)	10,500	3633
J. C. & R. S. McKinley 51-B (60-ac)	7500	3615
Stanolind-Tide Water Associated, O. J. Albright 14 (90.6-ac)	9000	3607
Sun-Seaboard Oil Corp., J. W. Akin 26 (163.4-ac)	9700	3593
Texfield Oil Co., O. J. Phillips 1-B (5-ac)	480	3722
Tide Water Associated, Lake Devernia 42 (270.85-ac)	10,300	3531
W. E. Jones 14-A (80-ac)	9400	3660
ANDERSON COUNTY (Cayuga Field)—		
Diamond Half Oil Corp., H. P. Barton 2 (200-ac)	1000	4081
Tide Water Associated-Seaboard, N. N. Wills 17-A (832.29-ac)	2500	4081
HENDERSON COUNTY (Cayuga Field)—		
Roeser-Pendleton, Inc., H. H. Wathen 1 (93-ac)	3600	4098
HOPKINS COUNTY (Sulphur Bluff Field)—		
W. L. Goldston-Big State Oil Corp., H. J. Smith 4 (450-ac)	2000	4543
Shell, J. G. Reynolds 1 (200-ac)	500	4541
TITUS COUNTY (Talco Field)—		
Byrd & Frost, Inc., et al, G. W. Belcher-Gulf 1 (80-ac)	350	4267
Humble, Mrs. L. Blackburn 5 (120.26-ac)	270	4375
A. P. King-Hughes 27 (1053.36-ac)	270	4373
A. P. King-Hughes 32 (1053.36-ac)	409	4324
K-A Oil Co., M. W. King 1, lot 2, blk 33	432	4313
Magnolia, C. W. Belcher 4 (80-ac)	120	4320
W. H. Crawford 9 (80-ac)	363	4310
Rozel Oil Co.-Y. Rogers, T. L. Leake 2, lot 2, blk 37	240	4321
HUNT COUNTY—		
Superior Oil Co. (Cal.), et al, P. D. Paul 1	*	6501
HOUSTON COUNTY—		
A. D. Hudspeth & Sunray Oil Co., A. B. Spence 1 (291.2-ac)	*	6068
RAINS COUNTY—		
Humble, O. L. J. Easter 1 (39¾-ac)	*	8482
LAMAR COUNTY—		
H. Salmon, Lowery & Cutler, E. C. Porter 1 (30-ac)	*	1647
CASS COUNTY (Rodessa)—		
Magnolia, L. A. Haywood 7, Priscilla Evans sur	431	5955
L. A. Haywood 8, Priscilla Evans sur	480	5920
Lewis & Wicks 2, Cass Co. School Land sur	390	6132

*Failures; †Junked; ¶Million cu. ft. gas.

Major Extensions

WILDCATS PROMISE NEW OIL FIELDS IN CORPUS DISTRICT

SOUTH TEXAS

WEEKLY STAFF REPORT

Corpus Christi.—Several more major extensions to deep sands in proven fields and testing of several wildcats which give promise of opening new production featured another active week for the South Texas Gulf Coast.

Phillips Petroleum Company's Katherine Hutchins 5, 2 miles northeast of the deepest sand in the Saxet field, Nueces County, cored almost solid sand section from 6879-6949 feet and ran an electric formation tester which showed excellent kicks at 6879-6901 feet and 6925-37 feet. Casing has been set on bottom for completion by the gun perforation method.

The well further indicates the tremendous potentialities of this newly discovered sand through its unusually thick section. It will be completed early in the week.

Oil Southwest of London

I. J. Allen and Seaboard Petroleum Corporation's J. O. Chapman et al 1, Section 38, 2 miles southwest of the London field, also in Nueces County, made salt water with considerable oil when a production test was attempted through perforations at 6464-71 feet. It was believed to have been a faulty cement job, and a squeeze job was attempted with 23 sacks. The job was not believed to have been successful, due to mechanical difficulties, but a retest will be made before recementing again. This well drilled to 6717 feet and set casing at 6588 feet. It probably opens a new field, rather than an extension to the London field, producing at a much shallower depth.

A second producer for the London field, also this county, was virtually assured with Cosner & Cosner's M. L. Stockton 1, NE SW NE Section 25, offset to the discovery, which cored broken sand and shale at 4703-19 feet. A drill stem test of 7 minutes duration developed 250 feet of oil with some oily mud and 15 pounds pressure through ¼-inch chokes, top and bottom. Completion will be effected early in the week.

Placedo Deep Sand Extended

The deep sand of the Placedo field, Victoria County, was being extended ½ mile to the southeast by Barnsdall Oil Company's Pickering & Roos 13, which recovered 4000 feet of pipe line oil and 28 pounds pressure on a 19-minute drill stem test of sand at 5904-9 feet. The well is now bottomed at 5911 feet with 7-inch casing set at 5902 feet. The well previously recovered 50 feet of oil and 125 feet of brackish water on a drill stem test at 5333-42 feet. Regular sand in the field is at 4750 feet.

Jim Wells County, rapidly becoming a hot spot in this sector's development campaign, had interest centered around Arkansas Fuel Oil Company's G. H. Bierstadt 1, J. Reynolds Survey, 1½ miles west of Orange Grove. The well had slightly more than 2 feet of oil sand topped at 4816 feet. Below this, however, was a salt water sand to 4827 feet, and the well is drilling ahead.

Graham's Wildcat Indicates Extension

Tom Graham's J. P. Luby 2, several miles southwest of the Bentonville field, Jim Kells County, drilled to 5792 feet, plugged back, and perforated at 5423-33 feet, where it cored oil saturation. The test started to clean, building up 250 pounds casing pressure and flowing considerable heavy mud cut with oil. It then was decided to rewash the hole and set a screen before final completion. This well indicates a possible extension to the field.

One mile due west of the above field, Stanolind Oil & Gas Company's J. W. Bird 1, drilled to 5825 feet, plugged back and perforated at 4668-78 feet, where it showed 1400 feet of salt water with some gas and oil. It is cementing to shoot higher.

The main development in the county, however, centers around the western extension to Premont field, where a 2250-foot shallow sand has been providing a number of excellent oil producers. These wells, rapidly drilled, are proving unusually profitable.

Barnsdall Oil Company was making progress below 4765 feet in Kate Edwards 1-A, deep test on the Lamar prospect in Aransas County.

Jackson in for Big Play

Jackson County is another area coming in for a big play. Another new wildcat location was staked during the week which will result in a 6500-foot test: Cockburn Oil Company and Temple Hargrove's Santa Theresa 1, Tract 34, Section 23. Two other wildcats are now active in this county, and several more locations are to be announced shortly.

Paul Meaders' Temple Lumber Company 1, Main Survey, 2 miles southwest of Austwell in Refugio County, was abandoned at 6760 feet after running electric formation tester.

Eleanor Oil Company's Green Estate 1, Williamson Survey, on the Gregory prospect in San Patricio County, is coring below 5750 feet, while Phillips Petroleum Company's Schmidt 1, 4

miles northwest of Gregory, is fishing for a bit lost in the hole at 4600 feet.

George H. Echols has started rigging up a deep test to be drilled north of the Heyser field, but in Victoria County. The well is W. H. Bennett 3, in a 78-acre tract in the J. E. Galban Survey.

BALCONES ACTIVE

Area southwest Santone also contributes to work

San Antonio.—A new deep play in the area southwest of San Antonio, plus a heavy development program along the upper Balcones Fault zone, brings a great deal of work to this sector of South Texas. One company announced a four-well wildcatting program to test Cretaceous at 7000 feet, while at least two more wells are expected to be announced soon for the area southwest of the Pearsall field, Frio County.

Amerada Petroleum Corporation is drilling below 7100 feet in the Glen Rose in Halff & Oppenheimer 8, deep test in the Pearsall field, Frio County. The well topped the formation around 7000 feet. Several miles southwest of this well, and in wildcat territory, the company's D. D. Harrigan 1 is drilling below 2550 feet on a projected deep test.

Four 7000-Foot Tests Planned

Still farther west and near the town of Batesville, Zavalla County, H. F. Wilcox's T. J. Gillam 1 was drilling below 2175 feet on a deep test. Wilcox Oil & Gas Company has a derrick up for the first of four 7000-foot tests to be drilled on a 7000-acre block in the southeastern portion of Dimmit County, the block extending into both La Salle and Webb counties. The company is drilling at 4610 feet in D. B. Dunbar 1, Survey 1135, 38 miles northwest of Laredo, Webb County. The well is the second deep test in this area by the same company.

Rumors are that at least one other deep test, possibly to 7000 feet to test Trinity sands, will be commenced northwest of Carrizo Springs in Dimmit County.

Just southwest of San Antonio in Bexar County, American Gas Company's Oliver 5, Gas Ridge field, has been drilled to 3425 feet in the base of the Glenrose, or top of the Trinity, and will be carried ahead. It has had several excellent showings.

Diamond Half Oil Company's E. Bibbs et al 1, on the west side of Darst Creek field, Guadalupe County, probably is the most important wildcat at this time along the upper Balcones Fault zone. Late in the week it was coring Austin below 2600 feet, headed to the Trinity sand. It expects to cut the fault in the Edwards lime or below, reaching the high side of the fault just above the Trinity, which is expected below 5500 feet.

Austin Chalk Play Paying

The Austin chalk play through Caldwell and Guadalupe Counties continues to net new production. W. J. Walton et al's Martin Hoffman 1, DeWitt Survey No. 11, one mile northeast of Zoboroski field, Guadalupe County, is being completed as a producer. It started flowing by heads when the tubing was run, but pumping equipment is being installed. This well originally was abandoned in 1934 at 2665 feet in Edwards limestone. It was plugged back to 2545 feet and swabbed about 75 barrels per day from chalk at 2360-2545 feet.

An extension to the northeast was being provided to South Darst Creek field, also in Guadalupe County, by Walter Myrrick et al's Guss Jahns 1, one-half mile northeast of the field. The well was deepened to 2507 feet, 146 feet in the chalk, where it is showing considerable oil. The last 28 feet was broken material, and casing is being run.

Several fields of Guadalupe and Caldwell Counties contributed excellent wells during the week, all being from the Austin chalk.

SHOW AT SWEEDEN

Second producer looms as saturated sand cored

Laredo.—A second producer for the newly discovered Sweeden field, Duval County, was in the making as Hiawatha Oil & Gas Company prepared to complete Miller et al 1, south offset to the discovery. It cored saturated oil sand at 5871-87 feet and was running a drill stem test at 5869-77 feet in the Conroe horizon. The well checked a few feet lower than the discovery, but showed sufficient saturation to indicate a good producer. Herberger 1, an east offset, is drilling near 4800 feet.

This district is being closely watched as it leads the way to an entirely new type of development for this portion of South Texas and at the same time indicates a new play.

Government Wells Trend Strike

On the Government Wells trend, one new discovery was effected. Humble Oil & Refining Company's Dowdy-Fee 5, Section 272, on the northwestern side of Seven Sisters field, Duval County, was completing from the Mirando sand at 2566 feet. It is the fourth sand for the field. The well cored gas sand at 2555-58 feet and oil sand at 2558-65 feet. A drill stem test of the sand showed 480 feet of pipe line oil with a blow of gas. It appears as though this sand will follow a northeast southwest trend along the western side of the field, as did the Loma Novia sand on the eastern side of the structure.

McMullen County again comes in for a shallow play with several small wildcat producers being completed. Edwin M. Jones' Ezzell 1, Section 3, about 5 miles northwest of Simmons City, plugged back from 1285 feet, gun perforated in Government Wells sand at 1185-1200 feet, and was completed for 2,000,000 cubic feet of gas per day with some brackish water through ⅜-inch chokes with 430 pounds tubing pressure and 470 pounds casing pressure. It opens a new gas pool. One-half mile due south in Section 3, preparations are being made to move in for Harry Ezzell 3.

Loma Oil Company has completed L. Jacob 2-B for 50 barrels per day on pump to open a new pool 1 mile north of Jacob field, McMullen County. The well, located in Section 15, cored sand at 1067-74 feet, showing oil, and set casing at 1062 feet. About 4000 feet west of South Calliham gas field, also McMullen County, Snider et al's Claunch 1, M. Hely Survey, cored Government Wells sand at 1052-58 feet, showing oil, and set casing. It had drilled plugs and was testing at last reports.

8000-FOOT OIL

Gulf States is preparing to perforate at Mestinas

Mission.—Establishment of 8000-foot production in the Mestinas field, Hidalgo County, appears possible, with Gulf States Oil Company preparing to gun perforate and test J. C. Engelman Jr. 3, deepened from 6812 feet to 8120 feet. The well was completed last year as a gasser spraying distillate after perforating casing at 6688-92 feet. The well, located in Lot 3, Block 70, has two promising sands, one topped at 7860 feet, showing 25 ohms resistance on electric formation test, and another at 8020 feet.

The test ran about 300 feet lower on these formations than Pantano Petroleum Company's deep wells about 6 miles southeast in La Blanca field. It is possible that this is one large structure with at least 300 feet of relief.

Sterling Oil & Refining Corporation's J. E. Engelman 1, wildcat in La Blanca area of Hidalgo County, was coring below 6725 feet at last reports.

To the northeast and in the La Sal Viejo area, Willacy County, Shell Petroleum Corporation's Yturria 1, deepening job, had progressed to below 8000 feet and was drilling ahead. Stapper Petroleum Company's deep test, Port Isabel 1, in Cameron County, was making hole near 5000 feet.

Industry Warned

[*Continued from page 12*]

most cases where they have been relied upon has led to excessive allowables and wasteful production.

While recognizing that the Bureau of Mines estimates have, in some cases, because of the nature of the basis of their preparation, been below the increased demand that has existed in the past few months, we recognize that these figures more nearly form an accurate basis on which the various regulatory bodies may properly base their estimate of consumptive demand. The committee on balance of supply with demand, in session concurrently with the session of the executive committee of the Independent Petroleum Association of America, has pointed out to us that notwithstanding the recommendations of its subcommittee with reference to excessive and unnecessary drilling in proven fields, that there is a continued increase in drilling activities. We desire to reiterate the action of our annual membership meeting in recommending the elimination of excessive and unnecessary drilling. Continuation of unnecessary drilling can only result in decreased allowables and will tend to increase waste and thus be detrimental to conservation of our natural petroleum resources.

DAMPEN PETTUS

Several failures cast gloom on trend play

Beeville.—Disappointing news comes from a number of the Pettus district wildcats and outpost wells. Several of the wells on highly praised prospects have dampened a new play just starting in this area.

Dirks Brothers' Tom Strauch 1, 1½ miles northwest or Normanna and in Section 19, Bee County, was running low on the Pettus and does not look like a producer.

J. R. Dougherty's Laura E. Weiss 1, in the Uranga Grant, on the extreme eastern side of the county, found salt water in the Pettus sand at 4308-41 feet and drilled ahead to the Conroe (Yegua sand), where it also failed to find production.

George B. White et al attempted to add another ¼ mile to the west side of Slick field, Dewitt County, but failed. Their test topped Pettus sand at 4216 feet, but carried gas to 4225 feet. Two feet of oil saturation followed, but below this depth, the section was nothing but shale. An attempted drill stem test failed and the well is drilling ahead to the Conroe sand.

Goliad Test Coring for Jackson

R. B. Swiger's Carrie Woods 1, in the Villa Survey, about 15 miles south of Goliad in Goliad County, was coring for the upper Jackson sand at 5685 feet. In this same sand, Keystone Royalty Company more than a year ago found gas and oil in several wells on the Woods ranch. These wells are about 2 miles west of the new test.

Southwest of Oakville field, Live Oak County, Coquat and Conservative's L. A. Reagan 1 was drilling near 3300 feet after failing to make a producer in the Pettus sand.

Oil Exhaustion

[*Continued from page 12*]

about 700,000,000 barrels of oil in its naval reserves and that the Navy annually consumes from 6,000,000 to 7,000,000 barrels.

In addition, the Government has about 150,000 acres of oil shale reserves, with a thickness of shale running as high as 1000 feet, from which an average of 20 gallons of oil per ton may be recovered. A satisfactory process has been developed for the recovery of this oil, Captain Stuart said, although at the present time it is "rather expensive."

According to Captain Stuart, Standard Oil Company of California is the principal lessee in Reserve No. 1, the largest holding of the department, and operates in three sections of the reserve, in which there is an estimated supply of 600,000,000 barrels, the company controlling 5301 acres.

In response to questions from committee members, Captain Stuart said he believed Standard Oil Company's rights in the California reserves could be purchased for approximately $75,000,000, and disclosed that negotiations have been under way to acquire these rights.

In Reserve No. 2, it is estimated that there is only about 50,000,000 barrels of oil remaining from a total of 150,000,000 barrels originally available. Standard Oil here controls 16,515 acres out of a total of 30,181 acres.

Reserve No. 3, in Wyoming, has never been developed, and has an estimated supply of 20,000,000 barrels, while little or nothing is known about the possible recovery from Reserve No. 4, in Alaska, which has an area of 22,000,000 acres, all Government controlled.

Austin.—The House voted last week to postpone until April 6, consideration of the bill by Representative Farmer, providing for an increase in pension payments. This delay is expected to kill the bill, as it would be almost impossible to pass any controversial issue during the final 30 days the legislature is in session.

The bill would provide pensions for all persons over 65 years of age regardless of need, and would place a tax on natural resources to provide the necessary income.

SOUTH TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CORPUS CHRISTI DISTRICT		
CALHOUN COUNTY—		
Humble & Plymouth Oil Co., P. H. Welder 8-A, J. M. Rios sur (Heyser)	280	5470
P. H. Welder 11-B, A. Sisneros sur (Heyser)	1150	5491
HIDALGO COUNTY—		
Ralph E. Fair, Inc., Daniel Flores 1, J. of Reynosa (Samfordyce)	65	2959
JACKSON COUNTY—		
Steinberger Pet. Co. & Chicago Gulf Oil Co., Lon Rogers 1, Rodriguez sur (Edna), owdd perf 4777-87. ¶10 &	40	5040
JIM WELLS COUNTY—		
Tom Graham & Gilcrease Oil Co., F. Bennett 3-A, Haldeman subd (Premont)	120	2266
F. Johnson 2, Haldeman subd (Premont)	410	2354
Tom Graham, William Singer 1-A, Haldeman subd (Premont)	115	2260
L. E. Seeligson 1, Haldeman subd, sur 215 (W. Premont)	515	2251
R. B. Swiger et al, Robert Adams 1, 330 ft n and el of w½ of R. Adams sur 122	*	5003
LIVE OAK COUNTY—		
Reynolds, Richardson, Adams & Lyles, George West 1, 330 ft swl of lot 515, blk D, Geo. West subd and 330 ft nwl Cameron County school land	*	3407
NUECES COUNTY—		
Bentex Oil Co., Frank Harman 2, sur 416 (Saxet) perf 6742-46	1060	6760
R. B. Bryant, Margaret Gallagher 1, John Smith sur (Saxet)	*	5004
Crown Central, Rand Morgan 4-B, sur 315 and 592 (Saxet)	505	4448
Houston Oil, Rand Morgan 14, Villareal gr (Saxet)	350	4865
Rand Morgan 18, Range 5 (Saxet)	865	6424
Humble, Josie Miller 2-A, blk 47, lot 25 (Flour Bluff)	465	6670
J. O. Miller 6, lot 6, blk 48, (Flour Bluff)	650	6656
Richardson Pet. Co., Cain & Sechrist 20, Russell Farm Lots (Saxet)	830	4460
C. J. Hoelscher 5, blk 22, Russell farm lots (Saxet)	305	4887
F. Quiros, Sheppard Farm Lots (Saxet)	235	5832
Southern Min. Corp., F. J. Smith 12, blk 9, Sheppard Farm Lots (Saxet)	265	4550
A. J. Till 2, Page Lands (Saxet)	*	4893
Sam Wilson, Kitty L. Dunn 1, Oak Park (Saxet Heights)	170	4078
REFUGIO COUNTY—		
Paul Meaders, Temple Lumber Co. 1, 330 ft s and wl sec 1, G. W. Maine sur	*	6760
United, M. F. Lambert 38, blk 36, Swisher sur	460	5915
SAN PATRICIO COUNTY—		
W. B. Craig et al, Drainage Ditch 1, 330 ft nl of sur, center e and wl of ditch, 100-ac lse, M. Remon sur	*	5019
Sun, Rosson (Jackson) 5, Fourth Add. Taft (Plymouth)	540	5646
VICTORIA COUNTY—		
Plymouth, J. J. Welder 1-A, 1850 ft nwl, 1050 ft nel Samuel Belding sur	*	3941
Sun, J. J. Marek 5, SA&MG sur (Placedo)	115	4774
BALCONES DISTRICT		
BEXAR COUNTY—		
J. H. Devine et al, Joe Miholski 1, 570 ft el 100-ac tr, 1171 ft sl of sur and tr, Jose Maria Bustillo sur No. 29	*	347
L. D. Ormsby, T. Barker 1, 150 ft el, 550 ft nl 386-ac tr, Jose Maria Barrera sur	*	902
CALDWELL COUNTY—		
Holes, Heibert & Brandish, W. F. Eiband 1, 440 ft el 57-ac tr, S. Seal sur, or 1090 ft nl, 1120 ft wl of tr.	*	2585
GUADALUPE COUNTY—		
Long & Ross, Ed Felix 1, 1½ mi s New Berlin, 660 ft sel, 330 ft nel V. Duran sur	*	634
MEDINA COUNTY—		
Ina O&R Co., Mrs. V. Wilson 3, Durst sur, (Ina) re-run, corrected init. prod.	38	892
E. M. Jenkins et al, E. B. Chandler & Co. 1, 1576 ft nl, 152 ft el of 380-ac tr, sec 461	*	1127
R. P. Whitfield, W. B. Odem 1, 700 ft nl, 155 ft wl Henry Castro sur	*	1434
LAREDO DISTRICT		
DUVAL COUNTY—		
Argo Oil Co. & John Clopton, Smith-Corkill 2, 330 ft nwl 330 ft 1½ mi s Hoffman field, perf 2672-75	30	2780
Conservative Oil Co., DCRC-Saentz 3, sec 51 (Colmena)	80	1507
Rodney Delange, Wright & Vela, sur 72 (Loma Novia)	*	2623
Gem Oil Co., J. B. Peal 2, sec 72 (Lopez)	¶15	2115
Humble, DCRC 10-C, sur 901 (Lopez)	135	2114
T. D. Smith 44, sur 382 (Seven Sisters)	*	2435
Magnolia, DCRC 12, sec 100 (Piedre Lumbre)	315	1971
Lundell Bros. 11, sec 60 (Gov. Wells)	*	2283
Mortimer & Springer, J. B. Peal 24-B, sur 796 (Lopez)	465	2191
J. B. Peal 25-B, sur 796 (Lopez)	405	2183
Plymouth Oil, W. K. Hoffman 5, sur 117 (Hoffman)	*	2866
Texas Co., A. H. Badgley 10, sur 307 (Seven Sisters)	560	2503
Bishop Cattle Co. 20, sec 57 (Loma Novia)	100	2584
Wellington Oil Co., DCRC 3, sur 51 (Colmena)	240	1492
Westheimer & Daube, Z. Campos 29, sur 224 (Seven Sisters)	¶5 & 40	2710
Windsor Oil Co. & Mills Bennett, W. R. Peters 1, 330 ft el, 2905 ft sl of w½ of sur 33	10	2655
JIM HOGG COUNTY—		
French Oil Corp., Paula V. de Garza 1, 600 ft sl, 625 ft el, blk 1, sur 269	*	2620
McMULLEN COUNTY—		
R. H. Feltner et al, H. W. Rhode 1, 330 ft s and wl of sw¼ of ne¼ of L. W. Snowden sur No. 18	*	3336
WEBB COUNTY—		
Mills Bennett, J. K. Kirkpatrick 1, 990 ft wl, 2310 ft sl sur 14	*	2700
Porter-Blanchard et al, Felix Perez et al 1, 330 ft sl and el of sec 1010	*	2260
Smith & Hamill, S. Benavides 32, blk 452, Arispe gr (Cole-O'Hern)	310	2930
S. Benavides 4-A, blk 304, Arispe gr (Cole-O'Hern)	80	2905
ZAPATA COUNTY—		
Ahler Bros., Daniel Yzaguirre 1, 300 ft swl of road, 330 ft sel Southern part sh 17, porc 15	*	420
Magnolia, A. D. Haynes 27, sur 7 (Comitas)	60	1178
A. D. Haynes 28, sur 7 (Comitas)	50	1188
United, A. D. Haynes, blk 13 (Comitas)	*	1228

*Failures; †Junked; ¶Million cu. ft. gas.

Revival Possible

BIG HILL WELL FLOWS 94 BARRELS IN EIGHT HOURS

WEEKLY STAFF REPORT

Houston.—What may lead to the revival of drilling on Big Hill dome, Jefferson County, is Stanolind Oil & Gas Company's M. E. Fitzhugh 1, Wm. McFaddin Survey, which flowed oil last week at the rate of 94 barrels of 35 gravity oil in 8 hours through ¼-inch choke with tubing pressure of 300 pounds and casing pressure of 700 pounds from sands at 4927 feet. Top of the sand was logged at 4913 feet. Seven-inch casing was cemented at 4913 feet.

Over 50 tests have been drilled in this area and only 3 wells have produced oil. Since Stanolind Oil & Gas Company took over the properties of Yount Lee Oil Company it has drilled 4 wells in this area. Fitzhugh 1 is the first to show oil in commercial quantities. There has been around 14,000 barrels produced out of Big Hill, discovered March 29, 1923. Approximately 14 years later, Stanolind Oil & Gas Company evidently has discovered a new producing sand. The field heretofore has yielded oil from sands at 1700 to 1800 feet. Showings have been encountered from 5900 to 5958 feet. Several sands around 6750 feet have shown oil and gas.

Wildcat Shows Salt Water

Salt water was shown in Texas Gulf Producing Company's Gillispie & Garnsey 1, Aldine area, S. Contreras Survey, Harris County, March 12, when a drill stem test of Cockfield sands from 6924 to 6971 feet in 12 minutes showed 9 stands of salt water with no pressure through ¼-inch choke on top and bottom of the testing tool. At the close of the week the crew was conditioning the hole prior to coring ahead.

During the past week cores were taken from 6932 to 6941 feet, 6944 to 6945 feet, 6945 to 6946½ feet, 6949 to 6959 feet, 6959 to 6964 feet, 6966 to 6969 feet, and from 6969 to 6971 feet. The formations were sand and shale with slight oil and gas odors. Probably the best showing was from 6949 to 6971 feet, which showed an odor of gas and a weak odor of oil. On an electrical logging device the wildcat showed 5 ohms resistivity from 6928 to 6939 feet.

On the Palacious prospect, Matagorda County, Glenn H. McCarthy's Foley 1, L. Goodwin Survey, was circulating at 8500 feet, the contract depth. It is reported that the well tried to blow out last week from Frio sands. Reliable information is that Foley 1 has encountered four different sands which have shown oil. No tests have been made of the sands. The operators are withholding information on the test.

Wildcat Location for Colorado County

Hammond Exploration Company's J. Croker 1, which extended the South Bay City field and also discovered a new producing sand, E. Hall Survey, Matagorda County, was flowing 360 barrels of oil in 12 hours, showing around 7 percent basic sediment and water. The well was flowing through the drill stem with ¼-inch choke on top and ⅜-inch choke on bottom of the testing tool. It has a pressure of 300 pounds. Casing was perforated from 8190 to 8194 feet with 19 holes.

Humble Oil & Refining Company announced location on the Eagle Lake prospect, Colorado County, last week. Relaw Land Company 1 is 1399 feet from the north and west lines of Tract 4-B in the J. L. Duggan Survey. This prospect was found with torsion balance by Union Central Oil Company in 1933-34 and later taken over by Humble Oil & Refining Company, which worked the area with reflection seismograph. The latter has considerable acreage in this area and the test will be an interesting one when it starts.

On El Campo prospect, Wharton County, Sam G. Harrison abandoned J. Byerly 1, E. T. R. R. Survey, Section 27, last week at 6524 feet after coring salt water sands. Salt water sands were encountered from 4591 to 5358 feet.

Interesting Locations in Jefferson

Several interesting locations were announced in Jefferson County and it is expected that the county will become one of the more active ones in the Gulf Coast. Magnolia Petroleum Company announced a wildcat location on the Cheek prospect; J. H. Phelan 1 is 2646 feet north of the southeast corner of T. & N. O. Survey No. 14 and 330 feet east of the west line. In the Labelle field, Sun Oil Company made a third location; J. Ward Estate 1 is 467 feet west of the east line and 933 feet south of Broussard 2, W. Burton Survey. David B. MacDaniels announced location for Nona Mills 1 as beginning at the southwest corner of the J. C. Grant Survey, east along the south line of survey 2332 feet, thence north at right angles 466 feet in the J. C. Grant Survey. This wildcat is in the Gilbert Ranch area and approximately 11 miles southeast of Nome field.

Two new locations were announced by Stanolind Oil & Gas Company in the northern sector of Amelia field, Jefferson County, J. W. Hall 1 is 1097 feet west of the east line and 150 feet south of the north line of a 73-acre tract in the H. Williams Survey. Sargl 2 is 1178 feet north of the south line and 150 feet east of the west line of Sargl 160-acre tract in the H. Williams Survey. Humble Oil & Refining Company also has made over 10 locations at Amelia field, Jefferson County, and is staging an extensive drilling campaign in the area.

Segno Field Extended West

Segno field, Polk County, showed evidence of being extended 1100 feet west last week when J. K. Dorrance's Wing 2, I. & G. N. Survey, No. 15 cored oil sand and was bottomed in the formation at 5197 feet. At the end of the week the crew was running a string of seven-inch casing for a production test. Sand and shale with an oil odor was encountered at 5148 feet. Top of the Cockfield was found at 5111 feet.

Gulf Oil Corporation has made a first location at Segno, S. Wing 1, being 3950 feet west of the east line and 2325 feet north of the south line of the southeast corner of I. & G. N. Survey, Polk County.

Near a fault running north and south in the northern end of Anahuac field, Chambers County, Gulf Oil Corporation completed two producers. Knowles 5 made 646 barrels daily through a quarter-inch choke with a tubing pressure of 900 pounds and a casing pressure of 1100 pounds from 7080 feet. Wilcox 3 made 668 barrels daily through a quarter-inch choke with a tubing pressure of 1125 pounds and a casing pressure of 1200 pounds from 7080 feet. On the northwest side of Anahuac, Humble Oil & Refining Company completed White E-11 at 7137 feet flowing 13 barrels per hour through a quarter-inch choke with a tubing pressure of 1175 pounds. Oil sand was encountered at 7134 feet and 5½-inch casing was cemented at 7116 feet.

South Houston's Second Salt Well

The second well to encounter salt at South Houston field, Harris County,

TEXAS GULF COAST

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
AMELIA—		
Humble, Crook 1	624	6781
ANAHUAC—		
Humble, White 11-B	312	7139
Gulf, Knowles 5	646	7080
Wilcox 3	668	7080
BIG CREEK—		
Gulf, Davis 74	247	2925
BATSON—		
Gulf, Wing 183	60	600
HASTINGS—		
South Gulf Oil Co., L. M. Gann 1	604	6080
Stanolind, Condon 1	633	6090
Miller 1	600	6080
HULL—		
Houston Oil Co., Hannah 1	562	5324
MANVEL—		
Texas Co., Belcher A-15	360	4080
RACCOON BEND—		
Humble, Paine 19-X	456	4110
Thompson 18-X	240	4100
SOUTH HOUSTON—		
Stanolind, Drilling District 16	*	4820
TOMBALL—		
Humble, Gebhart 5	240	5561
WITHERS—		
Texas Co., Pierce Estate C-22	*	5563
WHARTON COUNTY—		
Sam Harrison, J. Byerly 1, El Campo prospect, E. T. R. R. sur No. 27	*	6524

*Failures; †Junked; ¶Million cu. ft. gas.

was Stanolind Oil & Gas Company's Drilling District 28, H. & T. B. Survey, No. 5. The well was drilled to 4701 feet in salt. After running an electrical logging device the well was shut in for orders. It is on the east side of the field.

Southeast of the discovery well at South Houston, Stanolind Oil & Gas Company abandoned Drilling District 15, H. & T. B. Survey, No. 5, at 4820 feet.

Two wells on the northwest side of Hastings field, Brazoria County, were completed last week. South Gulf Oil Company made a producer out of L. M. Gann 1, H. & T. B. Survey No. 29, at 6080 feet for 604 barrels daily through a quarter-inch choke. Stanolind Oil & Gas Company's Condon 1, H. &. T. B. Survey, Section 29 was completed at 6090 feet flowing 633 barrels daily through a quarter-inch choke with a tubing pressure of 885 pounds and a casing pressure of 726 pounds.

Albert Plummer has announced location for a well at Hastings field approximately a quarter mile northeast of production. R. W. Brown 1 is 330 feet from the south and east lines of a 60-acre lease in the Perry and Austin Survey, Galveston County.

About 1¼ miles west of production at South Cotton Lake field, Chambers County, Kirby Petroleum Company's Haden 1, Chambers County School Land Survey, cored a brackish water sand from 6500 to 6509 feet at the end of the week.

Pratt to Speak

[Continued from page 12]

Company, Houston; "Modern Developments and Application in Steam Power," by Geo. B. Kitchell, Humble Oil & Refining Company, Houston; "New Developments in Well Completions in Texas Gulf Coast and Southern Louisiana," by I. W. Alcorn, The Pure Oil Company, Houston, J. U. Teague, Humble Oil & Refining Company, Houston, and W. A. Alexander, Shell Petroleum Corporation, Iowa, Louisiana; "Blowouts and the Development of Mechanical Control Equipment," by Madden T. Works, Cameron Iron Works, Houston; "Capacity Pumping of Oil Wells," by S. B. Sargent, Sargent Engineering Corporation, Huntington Park, California; Flow of Mixtures of Oil and Water Through Sand," by F. B. Plummer, J. C. Hunter, Jr., and E. H. Timmerman, all of University of Texas, Austin; "Causes and Prevention of Blowouts While Drilling," by Chas. B. Carpenter, United States Bureau of Mines, Dallas, Texas.

A. G. Levy, The Texas Company, Shreveport, Louisiana, is chairman of the program committee.

Arrangements Personnel

The following committee on arrangements, all of Dallas, has been appointed: John A. Ritter, chairman, Sun Oil Company; H. W. Bass, Bass Drilling Company; F. I. Brinegar, Continental Supply Company; Bruce Clardy, Heyser-Heard & Clardy, Inc.; Casey Cunningham, Standard Oil Company of Texas; C. L. Gladden, Magnolia Petroleum Company; N. G. Guiberson, Guiberson Corporation; Geo. A. Hays, Jr., Oil Well Supply Company; E. N. Koonsman, Pittsburgh-Des Moines Steel Company; W. D. McBee, M. J. Delaney, Inc.; W. H. Meier, The Atlantic Refining Company; Elmer Schmidt, Lone Star Gas Company; Eric Schroeder, Kibele Manufacturing Company; Melbert Schwarz, Seaboard Oil Company; K. C. Sclater, The Petroleum Engineer; E. L. Smith, E. L. Smith Oil Company; Paul P. Steed, Lion Oil & Refining Company; and J. E. Warren, Carl B. King Drilling Company.

This committee is arranging a program of informal entertainment for Friday evening, April 2, at 7 p.m., consisting of a dinner-dance to be held at "Chez Maurice," atop the Santa Fe Building. A special floor show, including a local choral club, will be presented. A special event will be a humorous review of Southwestern oil personalities.

All hotel reservations should be made direct, according to R. D. Risser, chairman, Southwestern District, A. P. I. Division of Production.

THOMAS C. ERVIN, president of Lucey Boiler and Manufacturing Corporation, Chattanooga, Tennessee, was a visitor in Houston last week.

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POWERFUL
FLEXIBLE
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Fartherest Off Shore

PLAN TEST 4300 FEET IN GULF OFF TEXAS COAST

Houston.—The first attempt to establish oil reserves in the Gulf of Mexico will be made by Humble Oil & Refining Company, which has applied to the war department, through the United States engineer's office at Galveston, for permission to drill for oil 8 miles east of High Island, and 4300 feet off the mainland of Jefferson County.

If the company is allowed to drill at this distance from the mainland the test will be farther offshore than any well drilled in the open ocean. Wells in California extend out into the Pacific ocean approximately 3500 or 4000 feet, depth prohibiting locations farther offshore. However, off the mainland of Jefferson County, the depth ranges down to 18 feet at 4300 feet off shore. The water is about 40 or 45 feet deep three miles offshore, a situation which should permit practical operations.

Oil Existence Believed

It has been a theory for a number of years that oil is under the Gulf of Mexico and that a number of salt domes exist there. This theory has been partly substantiated with geophysical work. Humble Oil & Refining Company has been working on land in Jefferson County and found some irregularities in the direction of the Gulf of Mexico. The company leased considerable acreage from the State of Texas. Leases in the gulf extend out three miles, according to the plans shown at the engineer's office in Galveston. Humble Oil & Refining Company purchased approximately 6000-acres from the state, paying around $450,000. This block adjoins on the south the company's block on McFaddin Beach, Jefferson County.

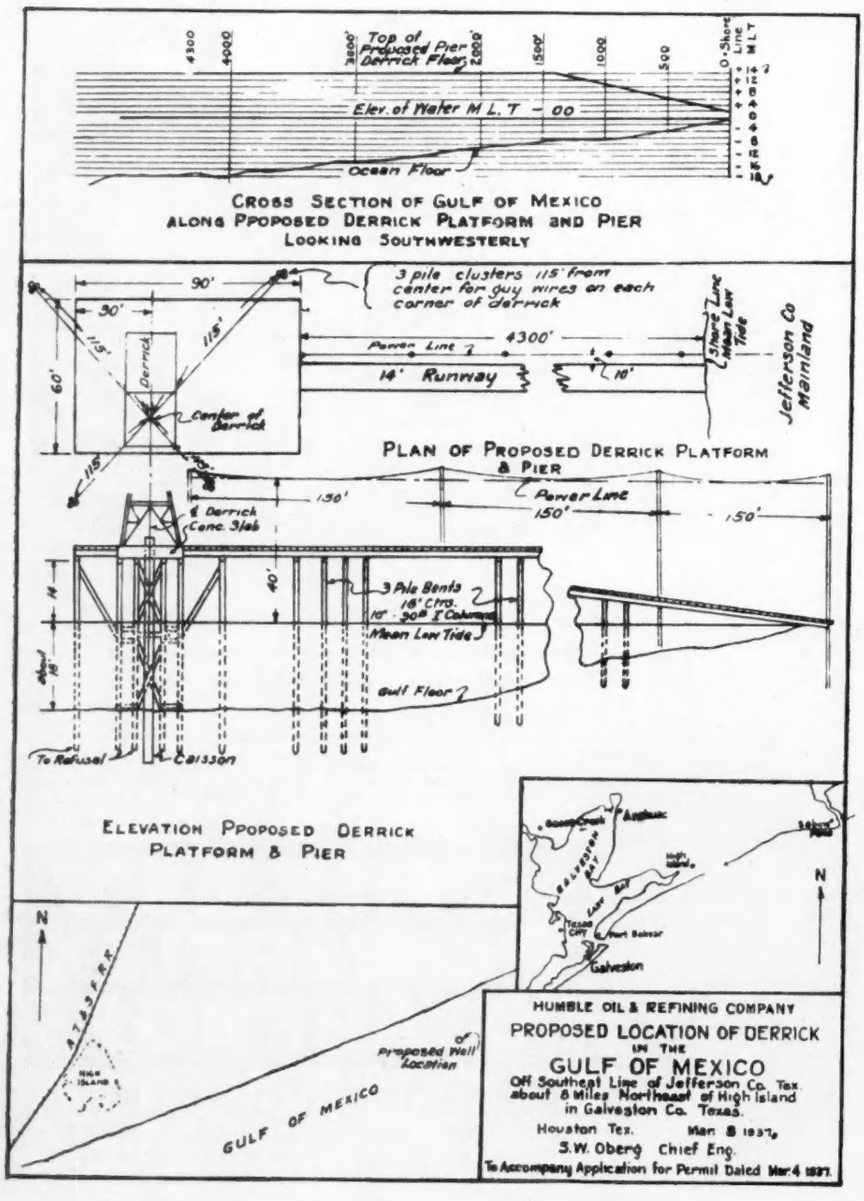
Humble plans to erect a 136-foot derrick with a 60 x 90-foot platform. The derrick will be supported by four 115-foot guy wires attached to three-pile clusters driven in the ocean floor to a depth of 100 feet. The center of the derrick will be 30 feet from the end of the 90-foot derrick floor. Under the derrick floor and supporting the derrick will be a concrete slab. The floor will be approximately 14 feet above mean low tide and about 32 feet from the ocean floor. Depth of water under the proposed location is 18 feet.

4300-Foot Runway

Connected to the derrick floor will be a runway 14 feet wide and 4300 feet long. This, according to the plans, will be supported by three-pile bents, spaced 16 feet apart, and 10-inch, 30-pound I-beams. A power line will be constructed 40 feet above the mean low tide and about 26 feet above the runway. The power line is to be supported by piles placed 150 feet apart.

Included with this article is Humble Oil & Refining Company's plan for the proposed location of derrick in the Gulf of Mexico. It shows the cross section of Gulf of Mexico along the proposed derrick platform and pier, looking southwesterly; plan of proposed derrick platform, pier and power line, and elevation of proposed derrick, platform and pier.

A public hearing will be held on the application at 10 a. m. March 19 at the new Federal building in Galveston to consider any protest that might be made from the standpoint of navigation. All interested parties are invited to be present or to be represented at the meeting. It is stated that for accuracy of record all important facts and arguments should be submitted in writing.


Top of Proposed Pier Derrick Floor
Elev. of Water M L T - 00
Ocean Floor
CROSS SECTION OF GULF OF MEXICO
ALONG PPOPOSED DERRICK PLATFORM AND PIER
LOOKING SOUTHWESTERLY
3 pile clusters 115' from center for guy wires on each corner of derrick
14' Runway
4300'
Power Line
Jefferson Co Mainland
PLAN OF PROPOSED DERRICK PLATFORM & PIER
Power Line
3 Pile Bents
16' Ctrs.
Mean Low Tide
Gulf Floor
ELEVATION PPOPOSED DERRICK PLATFORM & PIER
HUMBLE OIL & REFINING COMPANY
PROPOSED LOCATION OF DERRICK
IN THE
GULF OF MEXICO
Off Southeast Line of Jefferson Co. Tex.
about 8 Miles Northeast of High Island
in Galveston Co. Texas.
Houston Tex. Mar. 8 1937.
S.W. Oberg Chief Eng.
To Accompany Application for Permit Dated Mar 4 1937.
Galveston
GULF OF MEXICO
Proposed Well Location

MARINE DRILLING

Concrete wall around all Texas wells asked in bill

Austin.—A bill providing for unusual restrictions governing the drilling of wells on submerged lands has been introduced in the Texas legislature by Representative Ragalin Jones.

It provides that "the drilling or development of any oil or gas well, or the production of oil or gas, from any island, reef, marsh, salt water, lakes, bays or that portion of the Gulf of Mexico within the jurisdiction of Texas, or in any fresh water lake or stream in this state, shall be done in such way and manner as to prevent such pollution of the water as will destory or injure fish, oysters or shrimp.

"Provided that hereafter no oil or gas well shall be drilled, developed or operated in any of the salt waters or salt water marshes of this state, unless such well is first enclosed by a solid reinforced concrete wall. Such concrete wall shall be not less than 18 inches in thickness at the bottom, and if tapered to the top shall be not less than 10

inches in thickness at the top; such concrete wall shall be circular in shape and shall be built to enclose all the area needed for the drilling, development or operation of any such well; and such concrete wall shall be built so as to extend not less than 14 feet above the top of the water at mean tide.

"The Game, Fish and Oyster Commission shall have the authority and it shall be their duty to make such rules and regulations for the drilling and development and operation of oil and gas wells in the areas mentioned in Section 1 of this act as will prevent pollution and destruction of edible aquatic animal life.

"The failure or refusal to drill, develop or operate any oil or natural gas well according to and in the manner prescribed in this act or in the rules promulgated by the Game, Fish and Oyster Commission shall be deemed a violation of this act and shall be punished by a fine of not less than $500 and not more than $5000."

LEASE SOUND

Mississippi gets offer on submerged lands

Jackson, Miss.—Leasing activity continued to gain in South Mississippi, as a result of the recent discovery of an interior salt dome in Lamar County. In Copiah and Simpson counties, Wood Oil Company is leasing, and J. C. Vaughan is leasing in Copiah and Lincoln. O. M. Maddox and associates have a 30,000-acre block in Township 9 North, Ranges 8 and 9 East.

H. N. Tolar, state oil and gas supervisor for Mississippi, has revealed that the State Mineral Lease Commission has received a proposal for leasing approximately 400,000 acres of land in the Mississippi Sound off the Hancock, Harrison and Jackson counties coast line from the Federal Royalty Company of Houston, Texas. No action on the offer has been taken.

Past the Three-Mile Limit

A FINE point of international law which may come up for settlement is: "What nation owns the oil rights—if any—under waters lying more than three miles beyond a nation's shoreline?"

The plan of the Humble Oil & Refining Company to drill out in the Gulf of Mexico nearly one mile from shore may raise this point.

Royalty under the area which the Humble plans to drill will be paid to the State of Texas. But such questions as affect jeopardy to shipping, etc., under federal jurisdiction, must be determined by the federal government.

But, if operations should extend beyond the three-mile limit, then what? Nobody seems to have a very definite opinion. Some attorneys who are students of Texas history point out that Mexico, when she owned Texas, claimed 25 miles out from the shore, and argue that these rights or claims were transferred to Texas when Texas won her independence more than 100 years ago and are written into the Texas-U. S. A. Annexation Treaty.

Others argue that this is subject to debate. It has been international usage for centuries that when the nationals of a country discover and occupy land not previously discovered, rights to such land belong to the government of the nationals discovering and occupying the land. But whether or not construction of piers, and drilling of wells, with consequent development of the "properties" constitutes occupation, and therefore rights to property, in the "international zone" is open to doubt. Such procedure could easily lead to international complications.

One idea advanced is that, in the event of such a contingency, a halfway mark between the shores would solve the problem, providing always of course that developments would not be a hazard to international shipping.

Maybe the problem will prove to be simply a theoretical one. There are not many places along the shores of the United States where offshore water is shallow enough to permit drilling. Drilling in water at depths of 60 feet probably can be accomplished without tremendous difficulties, although hurricane possibilities in the open Gulf of Mexico will constitute a genuine hazard.

Ocean development at Elwood field, California. Wells do not extend more than 3000 feet out in the ocean due to the rapid slope.

Test Disappoints

JEFFERSON LAKE WELL SWABS SALT WATER AND SANDS UP

Lake Charles.—Jefferson Lake Oil Company's Lake Peigneur 414, Jefferson Island dome, 12s-5e, appeared disappointing last week. During the night of March 10, the well was opened and it flowed for six hours an estimated 30 to 50 barrels of fluid per hour through open tubing, it was reported. The well was killed and it is generally believed that it made mostly salt water while flowing with a small amount of oil Casing was perforated from 6930 to 6940 feet. It is understood the operators will cement the well again to shut off the salt water.

Jefferson Lake Oil Company is trying to withhold information on the well which is being drilled a mile from shore. The flow lines run from the well to storage tanks on the shore.

On March 5, Jefferson Lake Oil Company perforated the wildcat from 6930 to 6940 feet, and after washing the well for 1¼ hours it failed to "kick off" and the crew then ran swab to 1000 feet and salt water showed up. The test headed mud, gas and salt water. Later it started flowing, showed a 1600 pound pressure, and then sanded up. Screen and liner was pulled and a drill stem test was made. Commercial oil was found when the test was made and the casing was again cemented. Again it was perforated from 6930 to 6940 feet and showed salt water, as mentioned above.

Ultimate Outlook Better

It has been reported that the well flowed around 2000 barrels of pipe line oil. This could not be confirmed. Those claiming to be better informed state there is not 2000 barrels of pipe line oil at the storage tanks or near the well. The well was turned into the burning pits and the fluid burned for a few hours and then went out. The flare also burned. According to later information the cementing company was still at the well to re-cement.

There is little doubt that Jefferson Lake Oil Company's Lake Peigneur 414 eventually will make a commercial oil producer as the sand cored was saturated, but the salt water must be coped with first.

Acadia Wildcat Shows Oil

Another good showing of oil was encountered in Humble Oil & Refining Company's Nordyke 1, Ebenezer prospect, Section 23-10s-1e, Acadia Parish, last week when the wildcat sand and shale from 8719 to 8752 feet showed from 3 to 9 ohms resistivity. At the end of the week the crew was drilling ahead below 8973 feet in hard sand. Nordyke 1, which has encountered several good showings of oil while drilling to 8752 feet, has cemented 9⅝-inch casing at 6850 feet. It is east of the company's American Rice Milling Company 1, which was abandoned at 9308 feet. At one time the abandoned well was thought to be the discovery well of a new field in South Louisiana.

On the southwest side of Jennings field, Acadia Parish, Superior Oil Producing Company finished another oil producer. Iowa-Jennings 1, Section 41-9s-2w, was completed at 6489 feet, flowing 700 barrels daily through 13/64-inch choke with a tubing pressure of 1350 pounds and a casing pressure of 1300 pounds. After running an electrical logging device to bottom of the hole, 7-inch casing was cemented. Casing was perforated prior to the production test. The company has made location for Iowa-Jennings 2, 450 feet east and 125 feet north of the SEc NE¼ of Section 42, in Section 41-9s-2w.

Longest String of 7⅝-Inch Casing

Probably the longest string of 7⅝-inch casing ever set will be in The Texas Company's Horseshoe Bayou 1, Wax Lake area, Section 40-17s-9e, St. Mary Parish. It is reported that the operators intend to run 10,975 feet of it to protect the hole. Evidently the company plans to make a record depth well out of Horseshoe Bayou 1. The wildcat has had no important oil shows, and while the crew was coming out of the hole at 10,975 feet, the hole bridged. After cleaning out the bridge it was decided to set casing.

Another failure was listed at Jeanerette field, St. Mary Parish, when Teche Oil Company quit Alex Eves 1, Section 68-13s-8e, approximately 1 mile west of production, at 6707 feet. This is the second well for Teche Oil Company to abandon at Jeanerette.

Another 10,000-foot test, the fifteenth, was recorded in the Louisiana Gulf Coast last week when Humble Oil & Refining Company passed the mark in Elender 1, Houma Gas field, Section 23-19s-19e, Terrebonne Parish. At the close of the week the crew was drilling ahead below 10,174 feet. This well is being watched with much interest, as it looms as the discovery well for a new oil field in the Louisiana Gulf Coast.

The Texas Company is seeking deeper production at Four Island field, Terrebonne Parish, where State Four Island 8, Section 14-21s-16e, was drilling in water sand at 9043 feet at the end of the week to establish a new record depth for the field. This company continues to drill below the regular producing horizon at Lake Barre field, Terrebonne Parish. State Lake Barre 37, Section 30-21s-20e, was drilling in shale at 10,738 feet at the end of the week and searching for a new deep sand.

Reports are current that The Texas Company will drill several fields south of the deep Lafitte field, to see if Oligocene production can be established.

Interesting Wildcat Location Made

The long waited for wildcat location on Black Prince Island prospect was made last week by Amerada Petroleum Corporation and Louisiana Land & Exploration Company. This is considered one of the most likely geophysical prospects in the Louisiana Gulf Coast. Reflection seismograph and torsion balance have shown a closure of several hundred feet. Louisiana Land & Exploration Company and Amerada Petroleum Corporation leased some 14,000 acres in this area after working it with geophysical instruments. It was reported some time ago in The Oil Weekly that this prospect would be drilled in 1937. The operators announced location for State Bayou Des Allemands 1, 4470 feet south and 2834 feet west of the northeast corner of Section 13-15s-20e, St. Charles Parish.

In Lafitte field, Jefferson County, The Texas Company has two wells on the east flank approaching the producing horizon. L. L. E. Lafitte 6, Section 29-17s-24e, was drilling in shale below 8509 feet at the close of the week after coring a sandy shale showing oil from 7972 to 7981 feet. Rigolets 7, Section 26-17s-24e, was down to 9450 feet in sand and shale showing oil.

In West Feliciana Parish, Cavalier Oil Company announced location for G. W. Mackie 1, 951 feet north, 50 degrees, 30 minutes west of the southeast corner of Section 55-3s-2w. The same operators abandoned T. E. Mills 1, Section 58-4s-2w, East Feliciana Parish, at 5392 feet in hard sand.

English Bayou Extended Southwest

English Bayou field, Calcasieu Parish, was extended southwest last week when Fohs Oil Company's Castle 17, Section 14-9s-8w, came in flowing 600 barrels of pipe line oil through ¼-inch choke. Tubing pressure was 800 pounds. No pressure was reported on the casing. Castle 17 was drilled and

SOUTH LOUISIANA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ANSE LA BUTTE—		
Y. D. Spell, Begnaud 2	75	1350
EAST HACKBERRY—		
Independent Oil Co., Sanner 1	*	1753
Union Sulphur, Watkins 42	*	2990
ENGLISH BAYOU—		
Fohs Oil Co., Castle 17	600	7046
GILLIS—		
Union Sulphur, Barbee 12	*	9101
JEANERETTE—		
Teche Oil Co., Alex Eves 1	*	6707
JENNINGS—		
T. C. Markley 1	*	4280
Superior Oil Prod. Co., Iowa Jennings 1	700	6489
LAKE PELTO—		
Texas Co., State Lake Pelto 12 (wo) pb 6272 ft	137	6272
PORT BARRE—		
Pan American Prod. Co., Comier 3	*	7213
ROANOKE—		
Shell, Kratzer 6, dr to 9843 ft, pb and perforated 8850 ft	578	9843
SULPHUR—		
Union Sulphur, Fee 821 (wo) otd 3469, dr to 5512 ft	500	5512
EAST FELICIANA PARISH—		
Cavalier Oil Co., T. E. Mills 1, near Port Hudson, 58-4s-2w	*	5392
EVANGELINE PARISH—		
Louisiana Crusaders Oil Co., H. Hass 1, ne of Pine Prairie, 2-3s-1e	*	7506
IBERIA—		
Texas Co., State Fausse Point 2, Fausse Point area, 35-11s-8e, dr to 7157 ft, salt, pb perforated 6303 to 6553 ft	16	7157

*Failures; †Junked; ¶Million cu. ft. gas.

cored to 7046 feet in oil sand after logging the top of the sand at 7029 feet. Seven-inch casing was cemented at 7046 feet and perforated with 18 holes from 7037 to 7044 feet. Two-and-one-half-inch tubing was hung at 7034 feet.

What is believed to be a new Oligocene sand which no well has ever produced from was opened last week when Union Sulphur Company's Fee 821, Sulphur field, Section 9-9s-10w, Calcasieu Parish, was worked over from 3469 feet and recompleted at 5512 feet. The hole was cored to 5512 feet in sand showing oil after logging the top of the sand at 5496 feet. Casing was set and the well came in flowing 500 barrels of pipe line oil daily through ¼-inch choke with a tubing pressure of 760 pounds. There have been other wells at Sulphur to flow oil from the Oligocene formation, but Fee 821 is supposed to be flowing from a different sand.

Another wildcat location was announced on the Johnson Bayou prospect, Cameron Parish, where a number of dry holes have been completed. Magnolia Petroleum Company and Humble Oil & Refining Company made location for Albert Dobbertine 1, 205 feet south and 330 feet east of Section 9-15s-14w.

Northeast of the above wildcat and in the Big Lake area, Cameron Parish, Union Sulphur Company cored a sand showing oil in J. O. Hebert 1, Section 18-12s-8w, from 6436 to 6441 feet and from 6527 to 6535 feet. At the end of the week the crew was drilling ahead in water sand below 6671 feet.

At Mallard Bay prospect, Cameron Parish, Pure Oil Company made a production test on State Mallard Bay 1, Section 22-13s-3w, at 5955 feet after drilling to 10,146 feet, where the drill stem was stuck. The hole was plugged back to 6923 feet, and 9⅝-inch casing, which was set at 7906 feet, was perforated with 10 shots from 5945 to 5955 feet. The crew went in with a testing tool, and packer was set at 5925 feet. The tool was open 35 minutes and State Mallard Bay 1 tested dry. At the close of the week the crew was coming out of the hole with the testing tool.

Second Producer at Valentine

It was indicated last week that the second oil producer would be completed at Valentine field, Lafourche Parish. Pan-American Production Company's Harange Plantation 3, 660 feet northwest of the discovery well, Section 8-17s-20e, was washed at 6952 feet. Sand showing oil was encountered from 6928 to 6945 feet, and 7-inch casing was cemented at 6952 feet. A drill stem test during the week showed 30 barrels of oil and a 500-pound pressure in 35 minutes through ¼-inch choke on top and ⅜-inch choke on bottom of the testing tool. Screen and liner then were set for a production test. The company has made location for Harange 4, 660 feet south and 45 degrees west of Harange 2, Section 8-17s-20e, Lafourche Parish.

On the Abbeville prospect, Vermilion Parish, Continental Oil Company was completing a squeeze job on its 12,216-foot well, Hebert 1, which was perforated with 36 holes from 7666 to 7675 feet and showed a 1600-pound pressure before it sanded up. The operators will probably perforate the well again for another production test.

Mrs. Harry T. McClain, standing at left end of table, dedicated the Petroleum room of the Charleston Hotel, Lake Charles, in memory of her late husband, Harry T. McClain, Louisiana oil operator. The petroleum room has been placed at the disposal of the South Louisiana Oil Scouts Association.

Joseph Hemphill, standing at left of Mrs. McClain, in accepting the room said: "In behalf of the South Louisiana Oil Scouts Association, I thank you for your great courtesy in dedicating this petroleum room to our organization. We as an organization and as individuals consider it an honor to help keep alive the memory of so fine a man as was Harry T. McClain."

Included in the picture are scouts who hold a weekly check meeting at the Charleston Hotel.

Northeast of Pine Prairie, Evangeline Parish, Iouisiana Crusaders Oil Company abandoned Hatti Hass 7, Section 2-3s-1e, Bayou Chicot area, at 7506 feet after running an electrical logging device. Cockfield formation was encountered at 7197 feet.

Price Justified

[*Continued from Page 11*]

bringing about a relative decrease in the demand for . . . sour crudes. For example, in 1929 West Texas marketed . . . 133,000,000 barrels . . . This has generally decreased until in 1936 West Texas marketed . . . 60,000,000 barrels . . . the amount marketed has decreased approximately 55 percent. For the state as a whole, the quantity marketed in 1929 was nearly 299,000,000 barrels; in 1936, 418,000,000 barrels—an increase of 40 percent.

"A consideration of Dr. Nelson's testimony would indicate that he has had no experience in the actual processing and refining of West Texas crudes . . . Our experience . . . has extended to all the various grades of crudes produced in Texas."

The statement then explains its comparative profits per barrel, based on Oil & Gas Journal prices, used by Nelson: East Texas 15.5 cents; average West Texas 12.4 cents; Yates 12.5 cents; Savre 13.8 cents.

"The Humble found the following indicated refinery profit per barrel: East Texas 3.4 cents; average West Texas 1 cent; Yates 1 cent; Sayre 3.7 cents . . ."

The next hearing of the Legislative price investigating committee is to be held in Austin on March 18, according to Representative Penrose Metcalfe, member of the committee.

The testimony of Dr. W. L. Nelson, Tulsa, will be presented in an effort to contradict testimony presented last week by major oil companies.

15 LOUISIANA PERMITS

Shreveport.—Fifteen drilling permits were authorized last week by the minerals division, Louisiana Conservation Commission. Seven were for North Louisiana and 8 for South Louisiana. The 7 in North Louisiana were divided among the following parishes: Caddo 3, Grant 1, LaSalle 1, Morehouse 1, Ouachita 1. Those in South Louisiana were divided among the following parishes: Cameron 1, Calcasieu 1, Jefferson Davis 1, LaFourche 2, St. Landry 1, St. Charles 1, West Feliciana 1.

W. C. HAY has been elected full-time secretary-treasurer of the Mid-Continent Oil Field Haulers Conference, Inc., with offices in Oklahoma City. The organization has membership in Kansas, Oklahoma, Louisiana, Arkansas, New Mexico, Texas and Missouri. O. H. McAlister of Big Spring, Texas, is president.

Erratic Outposts

RODESSA EXTENSIONS HAVE TROUBLE MAKING OIL FLOW

WEEKLY STAFF REPORT

Shreveport.—Behavior of two outpost wells in the Gloyd horizon of the Rodessa field, located 5 and 14 miles respectively southwest of nearest production, proved far from satisfactory last week.

The five-mile southwest outpost of Arkansas-Louisiana Gas Company, W. S. Ford 1, Charles Grayson Survey, which was drilled to 6351 feet in black shale, and in which 7-inch casing was perforated with 47 shots at 6107 to 6112 feet in the Gloyd horizon, flowed and swabbed 34.2 gravity oil intermittently during the last week but finally was acidized with 3,000 gallons of acid and 300 barrels of oil and flowed for several hours and then ceased to flow and was being swabbed again. During one 12-hour period the well made 305 barrels of oil through ½-inch tubing choke with tubing pressure 45 pounds and casing pressure zero. The shake-out was 8 percent acid and basic sediment.

The 14-mile southwest outpost well of Holcomb, Thomasson and associates, Lizzie Henderson 1, R. Bennington Survey, in which casing was perforated Saturday, March 6, with 37 shots from 5980 to 5993 feet, swabbed 140 barrels in 24 hours and later in the week operators installed siphon and flow valve 2500 feet off bottom. If this does not improve the well it may be acidized. Trouble faced in this well is largely that of guarding against it blowing in again as a large gasser.

Dunn & Fisher's Susie A. Chatten 1, A. de los Santos Coy Survey, Marion County, 2½ miles southwest of Arkansas-Louisiana Gas Company's W. S. Ford 1, logged top of the red beds at 3645 feet and is believed to have cut the fault between 3600 and 3700 feet. Later it was drilling at 4392 feet. Arkansas-Louisiana's Laura McIntosh 1, William Edmonson Survey, was drilling at 4966 feet.

Mrs. J. E. Hale and associates made location for Lizzie Henderson 1, R. Bennington Survey, Marion County, lot 11, a 5-acre tract near Holcomb, Thomasson and associates Lizzie Henderson 1, R. Bennington Survey.

Extensions Linked

A connecting link between the recently opened north extension of the Louisiana side of the Rodessa field and the field proper, was established last week in Standard Oil Company of Louisiana's Parker 1, SE NW 9-23n-16w, completed in the Mitchell horizon (lower Gloyd) at 6013 feet. The well made 330 barrels of oil in a 20-hour gauge using gas lift.

This well is about midway between E. Edward Jones' two producers on the Maidie Sharpe tract in Section 4-23n-16w, and the northwest part of the main part of the Louisiana side of Rodessa.

Slightly less than ½-mile north of Jones' two producers, W. M. Layton, who had early production in the townsite part of Rodessa, staked location for Rector 1, SW SW 16-20-28, Miller County, Arkansas. It will go to the Rodessa horizon.

A west offset to Jones' two producers, also in Section 4-23n-16w, Caddo Parish, will be drilled by Gulf Oil Corporation in M. B. Campbell 1, SW NW 4-23n-16w. This marks the first test to be drilled in Rodessa by this company, although it owns an interest with Standard Oil Company in the Rodessa properties acquired several months ago from Haynes Drilling Company.

There were 49 active operations under way on the Texas side of Rodessa last week, including tests rigging up, and 17 on the Louisiana side, also including active rigs.

R. W. Norton's Payne 1, SE SE 27-23n-16w, south of Rodessa production and proposed 10,000-foot test, was coring last week at 8481 feet.

Making Dry Gas

Ohio Oil Company's A. H. Gray 1, Account 2, NW NW 26-21n-10w, Webster Parish, Cotton Valley field, showed 25 million cubic feet of dry gas with slight spray of distillate from the Holloway horizon when tested last week at 5540 feet; saturation was logged from 5521 to 5530 feet.

The discovery well of the Holloway horizon at top of the Travis Peak at Cotton Valley was Ohio Oil Company's R. L. Holloway 6, Section 23-21n-10w, which is still averaging approximately 500 barrels of oil daily.

Ohio Oil Company is running electrical tester in S. T. D. Coyle 1, SE SW 23-21n-10w, at 5570 feet.

United Gas Public Service Company has cemented 5-inch casing at 8520.5 feet in C. V. Davis 2, NW NW 23-21n-10w, with total depth of 8551 feet. This well recently showed 54 gravity distillate and 3½ million feet of gas at 8262 to 8300 feet. It is in the lower Marine producing horizon of Cotton Valley.

Woodley Petroleum Company's Gray B-4, NE NE 27-21n-10w, which showed only a small amount of gas when plug was drilled and the well tested at 5595 feet; 7-inch casing had been cemented at 5524 feet. It will be deepened to the lower Marine horizon.

Sligo Extension

Basal Glen Rose gas production at Sligo apparently was extended 1½ miles northeast last week when Louisiana Petroleum Corporation (W. E. Hall and associates) completed Edwards Estate 1, NW SW 5-17n-11w, at 5184 feet, as a large gasser with a spray of distillate. Perforated casing was set on bottom. The well was shut in awaiting gauge.

This well is 1½ miles north of Producers Oil & Gas Company's Petitt 1, Section 17-17n-11w, basal Glen Rose discovery gas well of the field, and ½ mile north and slightly west of Arkansas-Louisiana Gas Company's Davis 1, Section 8-17n-11w, that showed only 200,000 feet of gas in the Petitt and made a gasser at the 4300-foot level. As the structure at Sligo is now mapped the new well is on the northeast flank of the field.

Move for Another Deep Test

Having failed so far to find oil production to a depth of 7650 feet in J. D. Smelly 1, SW NE 13-16n-5w, Bienville Parish wildcat, that showed an estimated 50,000,000 feet of gas and a spray of distillate in the Travis Peak in a drill-stem test at 7163-93 feet and at 7205-40 feet, Lide, Greer and associates last week made location ¾ mile east of the present test for W. J. Smelley 1, SE NW SW 18-16n-5w, for another deep test.

These operators, after completion of Davis Lumber Company 1, Section 12-16n-5w, as a gas-distillate well in the Glen Rose, sold the gas rights on this block to Arkansas-Louisiana Gas Company, and their new location, as was the second test now drilling, is for exploration for oil, as they still own the oil rights on the tract.

Another 6000-foot wildcat test for DeSoto Parish is provided in leases on a block being assembled around Section 21-11n-12w, by George Shiveley. A. M. Billings is assembling a block around Section 30-11n-11w, DeSoto Parish, for a proposed test.

R. D. Webb's Brasher 1, Section 22-4n-2w, Rapides Parish, was drilling ahead last week below 2822 feet, after a drill stem test showed oil, gas and salt water at 2660 to 2675 feet with testing tool open 20 minutes.

Barnett Petroleum Company took a block of 5000 acres in Townships 3 and 4 North, Range 1 East, Rapides Parish, for a proposed 6000-foot test to spud by May 1.

New Sligo Regulations

Regulations governing the Sligo field, Bossier Parish, where 3 wells are now producing oil from basal Glen Rose, were promulgated last week by the minerals division, Louisiana Conservation Commission.

The regulations were placed in effect as of March 5.

Allowable production of oil is allocated among the wells of the field on a basis of acreage, bottom-hole pressure and gas-oil ratio. Allocations are based 75 percent on acreage and 25 percent on bottom-hole pressure, with the gas-oil ratio placed at 2000 to 1.

40-Acre Spacing

The order provides that "not more than 40 acres may be nominated for the acreage factor for any one well." As to well spacing, the order provides that "a permit for but one location shall be granted on a tract of 40 acres or less, which location shall be as nearly as practicable in the center of the tract."

The rules also provide that a minimum of 100 feet of surface casing shall be set and a minimum of 2600 feet of

second-string casing shall be set, with the second string and oil string being tested before plugs are drilled. Safety provisions are of the usual kind.

All three oil wells in the field are owned by United Gas Public Service Company. This company and two others, Arkansas-Louisiana Gas Company and Louisiana Petroleum Company and associates, own most of the acreage in Sligo.

Lisbon Area Leasing Active

Leasing activity increased last week in the newly discovered Lisbon area of Claiborne Parish, where E. T. Oakes, H. D. Easton and associates completed a flowing well in basal Glen Rose in NE NE Section 1-20n-5w, last December at 5379 feet. This well has flowed without interruption since it was completed.

T. L. James & Company has been negotiating with Oakes and his associates for purchase of the well and surrounding acreage, but no sale has been made. James & Company has been buying considerable acreage in this area.

Last week Turmen Oil Company of Tulsa took option on the NW SE Section 1-20n-5w. Louis O. McMillan of Tyler, Texas, leased SW NW Section 31-21n-4w, and Texas Trading Company of Tyler has been leasing in Sections 20-21n-5w and 23-20n-5w. Magnolia Petroleum Company took the north half of SW Section 28-21n-4w, and W. J. Greely has leased NE SE Section 4-20n-5w.

Bossier Parish Busy Also

Leasing also continues active in Bossier Parish. S. R. Vance acquired several tracts in Township 17 North, Range 11 West, from Danciger Oil Refining Company, southeast of the Sligo field. In Township 16 North, Range 11 West, United Gas Public Service Company has been adding to its holdings. Farther south in the same parish, Mid-Continent Petroleum Company has been leasing in Township 15 North, Range 11 West. Magnolia Petroleum Company, which has been taking some leases around the Bellevue field in Township 19 North, Range 11 West, has also been leasing in Township 15 North, Range 11 West. Mid-Continent Petroleum Company has also been leasing between the Cartersville and Sarepta fields in north Bossier and Webster Parishes.

Shreveport.—Standard Oil Company of Louisiana recently installed pumping units on four wells on the Louisiana side of Rodessa field and is planning installations on two more. United Gas Public Service Company has five Rodessa wells on which pumping units have been installed, all on the Louisiana side.

NORTH LOUISIANA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO PARISH (Rodessa)—		
R. W. Norton, Starke 3, 16-23n-16w	200	5994
Standard Oil Co. of La., Parker 1, 9-23n-16w	390	6013
CADDO PARISH (Pine Island)—		
Stanolind O&G Co., Dillon Hrs. 116, 14-21n-15w	10	1695

*Failures; †Junked; ‡Million cu. ft. gas.

WILDCAT PLANNED
Rodessa extension calls for Miller County test

El Dorado, Ark.—A 6000-foot test is expected in southwest Miller County, Arkansas, at an early date as a result of the recent 1¾-mile north extension of the Rodessa field, which places production near the Arkansas line. J. W. Love is assembling a block around Section 5-20-28, Miller County, a proposed location, being about 2 miles northwest of Haynes Oil Corporation and associates' 6500-foot dry hole drilled soon after Rodessa was discovered.

In Nevada County, Benedum & Trees Oil Company is making a seismograph survey of acreage on which it drilled a test to the Travis Peak more than a year ago.

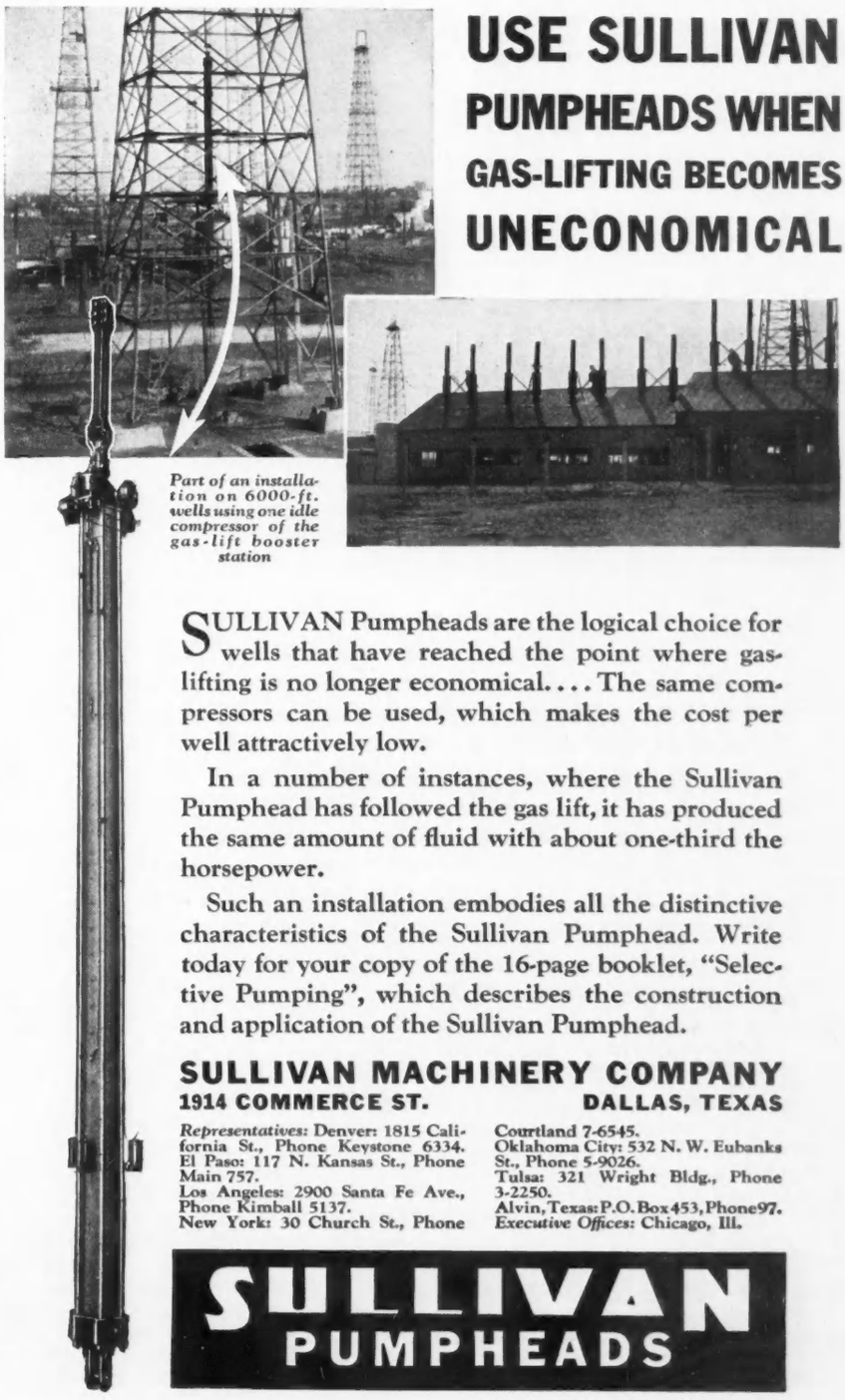
A. H. Stoltz and associates' recently assembled block in Township 19, Range 16, Union County, is being shot. Centering around Section 15-19-16, Cooper & Hart have assembled a block.

A torsion balance unit is working the acreage held by Root Petroleum Company in Hempstead County.

5 ARKANSAS PERMITS

El Dorado, Ark.—Five drilling permits were authorized last week by the Arkansas Board of Conservation. They follow:

Hempstead County—Davidson &



Part of an installation on 6000-ft. wells using one idle compressor of the gas-lift booster station

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SULLIVAN PUMPHEADS

Todd, Texarkana, Arkansas, Smith 1, 660 feet south and west NEc SW SW Section 1-11-25.

La Fayette County—Carl B. King Drilling Company, Dallas, Texas, E. H. Wolcott 1, 1320 feet south and west NEc Section 36-19-26.

Miller County—Nivla Oil Corporation, Texarkana, Arkansas, M. & P. Bank 1, 150 feet north and west SEc Section 18-15-26.

Nevada County—Walter Lown, Smackover, Arkansas, Grayson 1, 330 feet north and east SWc SW SE Section 12-14-20; and Powell Briscoe, Oklahoma City, Oklahoma, Ritchie 1, 230 feet south and 330 feet east NWc NW SE Section 10-14-20.

ARKANSAS DEAL

Tulsa.—One hundred thousand dollars cash and approximately $2,000,000 from one eighth of production is the consideration rumored in a deal E. H. Moore, Inc., of Tulsa, is negotiating with C. V. Lenz for purchase of the C. V. Lenz's Dale 7, Section 24-15-26, Miller County, Arkansas, and the surrounding 2800 acres on which the well is located. Dale 7 was recently completed at 4515 feet as a good pumper. It is reported Moore is planning several deep tests in the same county where two other tracts have been acquired.

ARKANSAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CLEVELAND COUNTY—		
J. R. Lockhart, Ida Robertson 1, 36-10-11	*	3497
NEVADA COUNTY (Troy)—		
Benedum & Trees Oil Co., Grove 6, 10-14-20	37	1255
OUACHITA COUNTY (Snow Hill)—		
Lion O. R. Co., Blanche Levy 1, 21-15-15	*	5350

*Failures; †Junked; ¶Million cu. ft. gas.

WOULD TAX GAS
Minnesota bill seeks 5 cents per 1000 cu. ft.

St. Paul, Minn.—A bill seeking a tax of 5 cents per 1000 cubic feet of natural gas received rough sledding last week before the house tax committee of the Minnesota legislature when Senator M. R. Cashman, Owatonna, entered a vigorous protest. He declared natural gas is "cheaper, cleaner and more convenient than coal." Use of natural gas by the state institutions in place of fuels now used would result in a saving that would more than offset the tax revenue the state could realize under the bill, he said.

Sponsors of the measure said it was designed to force the gas industry, which they declared uses little labor, to bear part of the relief load caused by displacement of labor. The committee made no recommendations on the bill.

Oklahoma City.—The executive committee of the Independent Petroleum Association of America met in the Biltmore hotel here March 12, to consider special problems. A meeting of the committee on balance of supply with demand was held at the same time.

New Sand Looms

TENSLEEP MAY PRODUCE AT ROCK RIVER FIELD

ROCKY MOUNTAIN FIELDS WEEKLY STAFF REPORT

Casper, Wyo.—Possibilities of Tensleep production for the Rock River field, Carbon County, southern Wyoming, were seen this week as Ohio Oil Company's Harrison-Cooper 7, C NW 2-19n-78w, an old Dakota producer deepened to test the Tensleep levels in the field, plugged back from 5671 feet to 5630 feet to test oil shows encountered at that depth. Top of the Tensleep sand was encountered at 5591 feet.

Rock River field is producing from two levels, the Dakota horizon being the original producing stratum for the field, with the Sundance sands opened for commercial production in 1935. Since that date several of the Dakota producers in the field have been deepened to the Sundance. Most recent of these old producers which have been deepened is Ohio Oil Company's Harrison-Cooper 1, SE SW 35-20n-78w, which encountered the Sundance horizon at 3190 feet last week and topped saturation in the sand at 3225 feet. Production casing has been set on top of saturation preparatory to drilling plug and swab. Depth is 3230 feet, in saturated sand.

Quealy Dome Well Cements

Further development in the Southern Wyoming area was seen this week as The California Company completed its Holst 6, CW SE SE 13-17n-77w, for an initial production of 9 barrels per hour. The well is the second to be completed in this field in 1937. The company's Wilson 3, SW NW SW 18-17n-76w, latest start on Quealy Dome, is waiting on cement to set around 12½-inch surface casing cemented on bottom at 145 feet.

The California Company and Ohio Oil Company's Wm. Kyle 2, on the discovery lease for Big Medicine Bow field, C SE SE 26-21n-79w, is making hole at 2882 feet while the companies' Union Pacific-Cronberg 4, C SW SW 25-21n-79w, is drilling at 1558 feet. The field is located in Carbon County, in the southern sector of Wyoming, and is one of the most prolific in that area.

Argo Oil Company's Ford 3, SW NW 33-36n-65w, on the northeast side of the Lance Creek field, Niobrara County, Eastern Wyoming, was nearing completion this week. Operators swabbed 2½ barrels per hour from the well on a short test.

The latest start in the Lance Creek field, Continental Oil Company's Schuricht 3-B, C SE SE 6-35n-65w, is below 3370 feet in a hard sandy shale formation. Location is in the proved section of the southern part of the field.

East Outpost Test Rigged Up

J. M. Huber Corporation has completed rigging up for its deepening of Midwest 1, SE SW 27-36n-65w, an old Lance Creek gas well producing from the upper Sundance levels, which company has contracted to deepen to the Basal Sundance for oil production. It is considerably east of present eastern limits of the field.

Another eastern extension test of Lance Creek, Ohio Oil Company's Leo 5 OPC-16, NW NW SW 33-36n-65w, ¾ mile east of the present outpost well on this side of the field, is drilling at 2620 feet with Basal Sundance as the objective. This company's Carrie Putnam 7, NE SW 33-36n-65w, Lance Creek, is showing commercial possibilities on tests of the Basal Sundance at 4020 feet. Top of the productive sand was found at 3930 feet, and operators have set the 7-inch production string at 3928 feet. Well was carried to 3956 feet at first and tested, being deepened further into formation this week.

Powder Wash Test Spuds

Mountain Fuel Supply Company spudded a new well in the Powder Wash field this week. J. C. Donnell 1, NE SE 31-12n-97w, is located about ¾ mile northeast of Hal Stewart 1, which was brought in last week. The company has two excellent producers in the field, which is situated in Moffat County, Northwestern Colorado. Each is producing from a different level of the Wasatch sands. Powder Wash is the only field in the Rocky Mountain region in which commercial oil is found in the Tertiary formations.

After completing its work of aiding in killing the wild gas well in the Gar-

MOUNTAIN STATES Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
WYOMING		
BIG HORN COUNTY (Garland Field)—		
Stock Oil Co., Allen 1, nw se 33-56n-97w, plugged and abd	¶60	3838
CARBON COUNTY (Overland Dome)—		
General Petroleum Corporation, Union Pacific 1, sw sw sw 6-19n-83w	*	5530

*Failures; †Junked; ¶Million cu. ft. gas.

land field, Northern Wyoming, Stock Oil Company's Allen 1-B, SE NW 35-55n-97w, 190 feet northwest of the company's wild gas well which was killed last week, has loosened drill pipe from bottom and is drilling ahead at 3871 feet in barren lime. It was originally drilled to 3800 feet in the Embar as a directional hole to kill the wild gas well and will now be drilled to completion in the Madison lime, black oil producing formation in the field.

Ohio Oil Company's State 1, NEc 35-55n-97w, Byron field, Big Horn County, Northern Wyoming, is waiting on acid before completion. It encountered good oil shows in the Embar-Tensleep zone at 5418 feet but swabbed only a nominal amount on first test. The company's Baker-Byron 2, SE NW 23-56n-97w, Byron field, has set 10-inch casing at 2383 feet and is drilling ahead at 2689 feet.

Sundance Dry at Spindletop

Developments in the Spindletop field, Natrona County, Central Wyoming, received a slight setback this week as the Wyalta Oil Company found the Sundance sand dry at 1040-1115 feet in Government 4, NW NW 5-29n-81w, and was forced to plug and abandon. Several other active wells are located in the field.

Revival of drilling in the old South Casper Creek field, Natrona County, was seen this week as Empire State Oil Company prepared to deepen U-3, SE NE 33-34n-83w, to test underlying formations. The field produces gas, and with the Poison Spider field, which adjoins the South Casper area, supplies gas to the city of Casper. The well is drilling at 1860 feet.

Ohio Oil Company abandoned the wildcat test of the Jay Em high area, Goshen County, Eastern Wyoming, this week. Red Cloud Cattle Company 1, NE NW 28-29n-62w, encountered Red Beds at 1690 to 2940 feet and was abandoned at 3090 feet in an unidentified formation after having missed the Tensleep sections.

CALIFORNIA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
DOMINGUEZ—		
Union, Callender 48	650	7062
EAST COYOTE—		
Bandini Pet. Co., Kammerdiner 1	185	2795
HUNTINGTON BEACH—		
M. K. F. Oil Co., No. 2	50	3190
Richfield, Crowell 1	25	3995
Geo. Terry, Crane 2	100	3995
RICHFIELD—		
Standard, Kraemer 2-24	120	4580
WILMINGTON—		
Bankline Oil Co., Walsen Seven 1	150	3517
Geo. F. Getty, No. 2	585	3550
Sovereign Oil Corp., Advance Truck 3	150	4371
Wilmington Oil & Dev. Co., Comm. 1	450	3564
LOS ANGELES COUNTY—		
Imperial Gypsum & Oil Corp., No. 1	*	7210
KERN FRONT—		
Standard, No. 4	120	2863
MIDWAY SUNSET—		
O. Hoyt, Maricopa 5	120	2863
Gibson Oil Co., O'Brien 4	300	3062
Oil, Inc., No. O-3	180	1645
Pattiway Oil Co., No. 1	100	1728
MOUNTAIN VIEW—		
Buffalo Oil Co., Buffalo 6	350	4880
MOUNT POSO—		
Frank Goldman, Glide 2	100	1502
Calcoast Oil Co., No. 1	*	2655

*Failures; †Junked; ¶Million cu. ft. gas.

Need New Sands

CALIFORNIA WILDCATTING ASSUMES BIG PROPORTIONS

WEEKLY STAFF REPORT

Los Angeles.—That oil companies of California are convinced they must find new producing sands in California, if the production of crude oil in years to come is to match demand, is evidenced by the number of wildcats now being drilled and the number of holes being drilled in proven areas to points below 9000 and 10,000 feet.

Search for Deeper Zones

Union Oil Company is making a special effort to locate deeper zones in proven fields. Its Bell 100 in the old Santa Fe Springs field has reached 9920 feet and is coring ahead in shale with streaks of sand. This is the deepest test ever drilled in the Los Angeles Basin and there is a possibility it will be drilled to below 10,000 feet, unless mechanical troubles develop. The company has seven-inch casing on the rack and it is likely the test will be cemented after a few more cores are taken. The last casing set in this hole was 8⅝-inch at 7427 feet. This deep test is being drilled in the proven area of the field and ordinary drilling equipment is being used. No special effort was made to secure extra heavy equipment.

Coring at 9530 Feet

Union Oil Company is also trying for a much deeper zone at Dominguez where its Callendar 50 is now drilling at 9530 feet in shale and sand, coring constantly. Previous drilling in this field has tapped eight producing zones, most of which are divided by layers of shale in between the oil sands.

In the old Richfield area, Union Oil Company's Chapman 29 is another deep test, with bottom of hole at 8610 feet. Most of the production in this field comes from the 3700- and 4600-foot levels. This hole has string of 11¾-inch casing cemented at 2913 feet. Recently it has been necessary to redrill the hole to 7183 feet. The outcome of this deep test at Richfield will mean much in the future of the field.

Record Looms at El Segundo

In the new El Segundo field in Los Angeles County, Union Oil Company's El Segundo 1 has reached a bottom of 7685 feet and is preparing to complete, and probably will be the deepest completion for the field. A string of 13⅜-inch casing was cemented at 993 feet and the hole is being reamed to set another string. Oil sand was topped in this hole at 7658 feet and the nodular formation was picked up at 7630 feet. Most of the wells in this field are completed at about 7400 feet.

Manufacturers of oil field equipment in California are cooperating 100 per cent with the drilling companies in an effort to assist them in reaching zones and depths only dreamed about some 10 to 15 years ago. Core recoveries are far better than before. Formation testers are used frequently to help in testing zones which have been a mystery in the past. Electrical coring devices are being used extensively.

New Gas Field Indicated

It is now indicated that Buttes Oilfields, Limited, has found a gas field in Sutter County, where this company has been trying for years to uncover an oil field. A formation tester on the company's fourth wildcat showed the zone at about 5100 feet is good for 15,000,000 cubic feet of gas daily, but no oil indications were found. Previous wells drilled by Buttes Oilfields in this general area found evidences of gas, but in much smaller quantities. Due to the fact that this area is fairly close to the San Francisco Bay area, where the consumption of gas is large, a gas field of even fair size will be valuable.

Near Stockton in San Joaquin County, Standard Oil Company of California's Tilden Community 1, Section 31-2-5, with bottom at 5312 feet and seven-inch casing cemented at 5179 feet, is good for 25,000,000 cubic feet of gas, wide open and will be shut in. No accouncement has been made as to whether the company will drill other wells, but it is expected that one or more holes will be started soon.

In the new Ten Section field in Kern County, discovered by Shell Oil Company, the company's Kern County Land 34, Section 29-30-26, has been recompleted for 2725 barrels of 35 gravity clean oil. Original bottom was at 8477 feet, but the test was plugged back to 8243 feet. Shell Oil Company controls practically all of the productive acreage in the new field. Other companies have drilled holes in several directions without securing production.

Wilmington field in Los Angeles Basin continues to be the busiest area in Southern California. During the previous week, four new wells were completed, and there are now 59 projects under way, ranging from locations to drilling wells. Of this number, 40 have been announced during the past 30 days. The small operator is having a wonderful chance in this field, since it is possible to secure small tracts.

Deep Gas Well

NEW YORK PRODUCER GOOD FOR 15 MILLION CUBIC FEET

EASTERN FIELDS

WEEKLY STAFF REPORT

Pittsburgh, Pa.—The week saw no outstanding developments or outside deep tests ineastern fields, except for a successful test in the deep sand gas field of New York and Pennsylvania.

Belmont Quadrangle Drilling Company brought in L. D. Clark 1, Steuben County, New York, at 4763 feet for 15,000,000 cubic feet per day with an initial rock pressure of 1760 pounds. The well topped the Oriskany sand at 4758 feet.

The same operators completed two other New York tests as dry holes. One on the M. Rideout farm, Cattaraugus County, was drilled through the White Medina, the local producing formation, to 3812 feet after passing the White Medina at 2789-2807 feet. In Schuyler County, Dix Township, no show of Oriskany sand was found in the test on the Federal Land Bank property, and it was abandoned at 2201 feet.

Other New York operations consisted of three wells drilling in Allegany County, three in Steuben County, and one in Cattaraugus County.

On the Pennsylvania side of the field, two operations are drilling and two are shut down in Potter County; four are drilling in Warren County, two in Tioga County, and one each in Crawford and Venango Counties.

Two Pennsylvania Deep Tests

Two of the deep tests in southwest Pennsylvania saw progress during the week. The test of William Snee et al on the Summit Hotel property, South Union Township, Fayette County, is being cased to the bottom of the Tully lime. It cleared an obstruction at 5700 feet, and three joints of 7-inch O. D. 30-pound casing were run in the hole on the cable to bottom at 6100 feet. There is about 4500 feet of casing in the hole, and work is progressing smoothly. There will be about 500 feet to reach the pay after casing.

Tools in the test of Laughner Oil & Gas Company and American Natural Gas Company on the William Wilsman farm, Independence Township, Beaver County, were recovered, the hole cemented, and drilling resumed at 5120 feet.

While field operations in Kentucky were still progressing slowly, the week saw three producers completed—the only oil producers of any importance in Eastern fields.

Kentucky Natural Gas Company completed J. E. Mitchell 5 as a 40-barrel well. No. 6 on this lease is rigged up. Evans & James Hunt completed Cambron Heirs 2 with a production of 50 barrels the first 24 hours after a shot. These operators are drilling No. 4 and 5, and have two more locations staked on this lease.

The third Kentucky completion was C. A. Shacklett Company's Ronnie Graham 1, which gauged 35 barrels the first 24 hours. No. 2 is drilling and No. 3 has been rigged on this lease by the same operators.

Mid-East Gas Company's test on the Emma Williams & Company property, Clayton Township, Perry County, Ohio, which made 476,000 feet of gas naturally in the Clinton sand at 3215-22 feet, was shot with 40 quarts and gauged 1,750,000 cubic feet after the shot.

Legislative Probe

CONTEMPLATE OIL AND GAS CONTROL IN PENNSYLVANIA

Harrisburg, Pa.—A legislative investigation of the oil and natural gas industry in Pennsylvania was forecast here last week when it was learned that the attorney general's office has been instructed to draft legislation authorizing the investigation. It will be introduced in the legislature as an administration measure, probably this week.

The investigating body, it is understood, would be comprised of three persons who would study whether the state should control the crude oil, natural gas and gasoline industries just as it governs firms dispensing electricity, illuminating gas and transportation. The oil industry would be placed under jurisdiction of the new public utility commission, being established by the administration-controlled legislature to replace the present Republican-controlled public service commission.

Governor George H. Earle is said to be seeking completion of the investigation before adjournment of the legislature, probably some time in May, so the committee's recommendations may be enacted into law. Authorization of the investigation will carry out one of the recommendations made in his opening address to the legislature:

"I favor appointment of a committee to study the question of monopolistic practices in the gasoline and oil industry, particularly price wars and price fixing. My recommendation is that your honorable body consider the feasibility of including under public utility regulation all natural and manufactured gas, gasoline and oil, and possibly coal."

Another measure pending before the legislature which is commanding the attention of Pennsylvania oil men would levy a tax of 2 cents a gallon on fuel oil.

EASTERN STATES
Completions
OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
ASHLAND COUNTY—		
Ohio Fuel Gas Co., D. M. Sigler 1	*	2974
ATHENS COUNTY—		
Gibson & Ross, N. E. Dodds 3....	¶	750
Hocking Valley Drilling Co. et al, New York Co. 2	*	3667
Ohio Fuel Gas Co., F. E. Kimes 1	*	1156
BELMONT COUNTY—		
Shay McMullen, Nick Dyken 2 ...	¶½	1906
COLUMBIANA COUNTY—		
Natural aGs Co. of W. Va., Albert Ketchum 1	¶	4496
COSHOCTON COUNTY—		
Murphy Petroleum Co., George Noland 1	*	3393
Ohio Fuel Gas Co., John Lapp 1...	¶	2562
Willard Murphy & Co., George L. Noland 1	*	3384
FAIRFIELD COUNTY—		
City Natural Gas Works, Matilda Bower 4	¶	....
HANCOCK COUNTY—		
Brown & Co., R. J. Vansickle 1...	2	1435
Brown & Co., G. H. Hammond 1..	2	1447
V. P. Haven, G. H. Hammond 2...	*	1451
HARDIN COUNTY—		
Petersine Realty Co., Oscar Gramppy 2	¶	1343
LICKING COUNTY—		
Armbruster & Stricker, Sarah Patton 7	12	688
H. W. Scott et al, Kemp & McCracken 2	*	2989
Preston Oil Co., David E. Wright 1	*	669
Preston Oil Co., Fred Baughman 3	5	638
LORAIN COUNTY—		
Kemrow Oil Co., Charles Osborne 1	*	2721
Snyder & Wiles, Charles Osborne..	*	2675
William Dempsey, Nicholas Miller 2	¶½	....
Wittmer Oil & Gas Co., H. W. Ingersoll 1	¶1	2663
MAHONING COUNTY—		
Harold G. Phillips et al, Richard & Bell Fenton 1	*	4014
MEDINA COUNTY—		
E. R. Edson & Co., Ray Koors 2..	20	556
E. R. Edson & Co., Ray Koons 1..	40	563
G. S. Lackett, H. O. Gunder 2....	*	364
H. O. Gunder 3	*	370
MEIGS COUNTY—		
Ohio Fuel Gas Co., Millard Romine 1	*	863
Proffitt & Co., J. C. Proffitt 2.....	¶½	2119
MORGAN COUNTY—		
Burns Oil & Gas Co., Maria Metzger 11	¶¼	858
PERRY COUNTY—		
Mid-East Gas Co., Emma Williams & Co. 1	¶1¼	3222
Wehrle Co., Robert Beaver 5	¶	1137
SHELBY COUNTY—		
Wittmer Co., Stephen Schmidtmeyer 1	*	....

Company, Well and Location	Init. Prod. Bbls.	Depth
STARK COUNTY—		
Ohio Fuel Gas Co., Joseph Friedman 2	¶	4252
East Ohio Gas Co., K. W. Bender 1	4	4229
Sosiety of Precious Blood 1	¶⅓	2897
TUSCARAWAS COUNTY—		
Ohio Fuel Gas Co., L. Grueneisen 1	*	4355
WASHINGTON COUNTY—		
Oscar F. Rupple, O. F. Rupple 1	1	1665
Thomas H. Cisler, Senious Duval 1	*	1050
WAYNE COUNTY—		
Henry Dempsey, Charles Yokum 1	*	3210
Ohio Fuel Gas Co., Ella Postel 1	*	3109
WEST VIRGINIA		
BOONE COUNTY—		
Owens Illinois Glass Co., Letha Myer	¶	2197
United Fuel Gas Co., Mohler Lumber Co. 4641	¶¼	4740
BRAXTON COUNTY—		
Pittsburgh & West Virginia Gas Co., Amanda Gerwig 3	*	3090
CABEL COUNTY—		
National Gas Corp., R. Taylor Morris 1	¶¼	2772
West Virginia Gas Co., Martha Nida 1	¶	3252
CALHOUN COUNTY—		
Hays Gas Co., Lora Hays 1	¶2½	2224
Veri Stewart et al, J. S. Owen 1	¶	1925
CLAY COUNTY—		
Suth Penn Oil Co., O. D. Stockley 112	10	1916
GILMER COUNTY—		
A. E. Ellis et al, Ware & Webster 6	¶	2115
H. B. Scott, Norris heirs 1	¶	1950
F. G. Bish, Mary E. Snider 1	¶	2008
Howard Robinson et al, C. F. Stalnaker 1	*	1708
Ludwig Oil & Gas Co., Mrs. Gay Hinzman 3	10	1872
KANAWHA COUNTY—		
Ten Mile Oil & Gas Co., H. C. Dickinson 19	*	2156
Godfrey L. Cobot, Inc., Campbells Creek Coal Co. 11	¶½	5060
United Fuel Gas Co., W. C. McKee 4689	¶¾	4943
United Fuel Gas Co., Georges Creek Land & Mining Co. 4658	2	5139
MARION COUNTY—		
Hope Natural Gas Co., Enoch C. Morgan 2	¶¼	1830
PLEASANTS COUNTY—		
Lawrence McClure et al, Samuel G. Hammet 1	4	1310
Max Oil & Gas Co., C. P. & Delphia O. Simonton 1	¶⅓	1812
RITCHIE COUNTY—		
Marietta Oil & Gas Co., W. E. Conway 1	1	1635
Oil & Gas Co., P. S. Burbridge 1	¶1	2050
McCarthy & Hoff, A. E. Dye 1	*	2320
W. D. Gribble et al, Strickler Heirs 1	¶	1915
ROANE COUNTY—		
L. L. Reed et al, L. L. Reed	¶	1475
L. C. Young et al, B. R. & J. R. Fields 1	¶1¼	1460
TYLER COUNTY—		
Rafferty & Moore, Madison Ferrell 1	¶	1787
UPSHUR COUNTY—		
Cumberland Allegheny Co., Grace Ridgeway 1	¶	4275
KENTUCKY		
OHIO COUNTY—		
Elvis Dehart & Co., Odell Heirs 4	50	....
Evans & James Hunt, Cambron Heirs 2	50	....
Globe Oil & Gas Co., R. & H. Graham 15	55	....
Henry Scholl, Alex Whitehouse 4	30	....
Kentucky Natural Gas Co., J. E. Mitchell 5	40	....
McGowen & Co., Tice Baker 1	*	....
C. A. Shacklett Co., Ronnie Graham 1	35	....
PENNSYLVANIA		
GREENE COUNTY—		
H. D. Freeland et al, A. & J. Hoy 1	¶	3225
Manuufacturers Light & Heat Co., J. S. & O. R. Kiger 1	¶⅓	2228
WASHINGTON COUNTY—		
Scott et al, Crouch 5	¶⅓	2495
NEW YORK		
STEUBEN COUNTY—		
Belmont Quadrangle Drilling Co., L. D. Clark 1	¶15	4763
CATTARAUGUS COUNTY—		
Belmont Quadrangle Drilling Co., M. Rideout 1	*	3812
SCHUYLER COUNTY—		
Belmont Quadrangle Drilling Co., Federal Land Bank 1	*	2201

*Failures; †Junked; ¶Million cu. ft. gas.

Getting Too Active

FEAR MARKET ENDANGERED BY BUCKEYE DRILL VOLUME

WEEKLY STAFF REPORT

Mt. Pleasant, Mich.—Proration or a compromise restricted drilling program may be instituted in the new Buckeye, Gladwin County, field if operators in the area can reach agreement on their problems.

Two meetings of operators have been held in the Buckeye field where 50 strings of tools are now active and a possibility that the area will have 75 to 100 strings going within 60 days or less. An average of 3 new locations per day are being made at the present time.

Some operators fear that if the boom now under way continues to progress that the present $1.42 crude price may tumble in the face of a flush field. Present daily output of the field is 15,000 barrels but inside completions due in March could easily boost this to 35,000 to 50,000 barrels daily.

Pipe line outlets in the field now could handle 35,000 barrels daily and these are being stepped up.

No Agreement on Curtailing

So far few operators have come to any agreement on a restricted development program, although several of the major acreage holders have agreed that if producing flush oil wide open will shake the price, that proration would be preferable.

Michigan had its first proration back in 1931 when the East Greendale pool was opened. It was a pipe line proration worked out with operators. Later under associations and code days both Porter and Crystal fields were prorated, agreements carried out as to offset drilling and acid treating of wells. Proration collapsed and the organization handling it broken up when production sunk to around 27,000 barrels a day late in 1936.

Important Extensions

Two important extensions were indicated in Michigan this week. Mammoth Producing & Refining Company's Jackab 1, SE NE SE 10-18n-1w, at 3616 feet was producing 56 barrels hourly from Dundee lime, indicating a northwest trend in the Buckeye township field. The well is on a 40-acre lease for which Mammoth Producing & Refining Company paid Daily Crude Oil Company $65,300 for lease and the completed well. It is two locations west of Sun Oil Company's Salla 1, which had an initial peak of 570 barrels natural and was waiting tubing and acid this week.

Meanwhile Fortney Oil Company's Miller 1, NE NE NE 15-18n-1w, a half-mile west of the discovery well, showed only light Dundee oil pay when drilled to 3679 feet and salt water, but will be treated. C. L. Maguire's Foster 1, Section 15, still west of the Miller, faced abandonment this week after failing to show commercially in the Dundee.

In Sherman township (15n-6w), Isabella County, Pure Oil Company's Baker 1, Section 33, a half-mile west of the discovery, produced 1250 barrels after acid from Dundee lime for best recovery in new field to date.

MICHIGAN

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARENAC COUNTY—		
Arenac Oil Co., Griffin 1, sw sw nw 1-19n-5e	*	110
Turner Pet. Co., McKay 1, ne sw se 10-20n-4e	200	2628
McClanahan Oil Co., Seignious 2, ne nw ne 10-20n-4e	200	2640
GLADWIN COUNTY—		
Rowmor Corp., State 1, nw nw ne 36-18n-1w	70	3493
GRATIOT COUNTY—		
Talbot & Huton, Sharrar 1, nw nw ne 23-11n-4w	*	3300
INGHAM COUNTY—		
National Mineral, Smith 1, nw nw se 9-4n-1w	*	609
ISABELLA COUNTY—		
H. E. Bell, Delo 1, se sw sw 17-13n-5w	*	3868
Pure Oil Co., Baker 1, se se nw 33-15n-6w	1250	3630
Leiter 1, nw nw nw 34-15n-6w	100	3629
Rowmor Corp., Leiter 1, ne ne sw 33-15n-6w	700	3631
Chas. Strange, State 1, sw se se 34-15n-6w	*	3651
T. F. Caldwell, Inc., Chapple 1, se ne se 21-16n-4w	*	3850
LAKE COUNTY—		
R. B. Tamblyn, Casheon 1, nw nw ne 25-18n-13w	*	3200
LIVINGSTON COUNTY—		
J. E. Flannigan, Curdy 1, ne ne se 18-3n-5e	*	1600
MANISTEE COUNTY—		
Jacob Bolema, Red Wing 1, nw nw nw 15-21n-16w	*	2600
MECOSTA COUNTY—		
Stewart-Atha, Amsden 7, c nw sw 31-13n-7w	¶15	1308
MONTCALM COUNTY—		
R. M. Burch, Clevenger 1, c sw se 5-12n-7w	¶27	1298
Superior Drilling Co., Clevenger 1, se sw 5-12n-7w	¶1½	1321
MUSKEGON COUNTY—		
Lentz-Miller, Balawander 1, c sw 18-9n-14w	*	1202
Jagt 1, c ne 13-9n-15w	*	1300
Klise 1, c ne 12-9n-15w	*	1330
OGEMAW COUNTY—		
Rowmor Corp., Thompson 1, sw se se 31-21n-4e	*	2690

*Failures: †Junked; ¶Million cu. ft. gas.

THE OIL WEEKLY REPORT ON IMPORTANT

Wildcat Tests

ALABAMA

CHOCTAW COUNTY—Joe Modisett et al's McCorvey 1, se sw sw 20-9n-2w, sd 105 ft, completing rur.

GREENE COUNTY—Willis & Payne's R. L. Lett 2, se nw 6-21n-2e, dk.

HOUSTON COUNTY — Rice O&G Co.'s Oakley Est. 2, nw sw 9-3n-29e, sd 4975 ft.

MOBILE COUNTY — Grand Bayou O&G Co.'s J. A. Stafford 1, sw sw 24-7s-3w, lcn.

ARKANSAS

CLARK COUNTY — McLarry & Carlin's Bierne Lbr. Co. 1, ne se ne 22-10s-21w, rur. J. G. Wooten's Sparkman 1, sw nw 1-11-20, sd 545 ft.

CLEVELAND COUNTY—J. R. Lockhart's Robertson 1, sw se 36-10-11, dry abn 3497 ft.

CLAY COUNTY—Nelson et al's Underwood 1, se sw ne 4-20-8, spd sd 800 ft.

DALLAS COUNTY—Walter Lown's Atkinson 1, nw se 7-10-13, temp abn 2763 ft.

GRANT COUNTY—Wallace & Staples' W. F. Davis 2, se se nw 23-6-15, drill stem stuck 2380 ft.

HEMPSTEAD COUNTY—Root Pet. Co.'s Drake 1, se nw 23-14-24, elev 311 ft, base massive anhydrite 2905 ft, dr 2984 ft lime. J. R. Birdwell's Duckett 1, 24-13-24, 10-in csg 100 ft. Sheppard & Todd's Smith 1, ne sw se 1-11-25, spd sd 600 ft for fuel.

LA FAYETTE COUNTY—King Drlg. Co.'s Walcott 1, c ne sw 36-19-26, spd, woc 12½ in csg 488 ft. A. M. Neely's Meek 1, ne nw 35-19-25, sd 3180 ft.

LITTLE RIVER COUNTY—J. G. Strahan's Dierks Lbr. Co. 1, 21-12-28, dr 2015 ft anhydrite (corrected depth).

MILLER COUNTY—Nivla Oil Corp.'s Merchants and Planters Bank 1, se se 18-15-26, spd (formerly Erwin & Leach) Timbo et al's Capps 1, sw sw 11-20-28, mim. Thad Bryant's Commercial Nat. Bank 1, 20-18-28, lcn. W. M. Layton's Rector 1, se se 17-20-28, lcn.

NEVADA COUNTY—Benedum & Trees Oil Co.'s Block 1, ne se 9-14-20, elev 287 ft, cored sandy lime so 4990-5012 ft, sd, td 5012 ft. Mary Jackson 1, nw ne 9-14-20, tested 900 ft oih 2122-32 ft, cemtd csg 2134 ft, wosr, td 2134 ft; Mary Jackson 2, ne ne 9-14-20, dk. G. H. Vaughn's W. R. Mitchell 1, sw se 4-14-20, dk; Christopher 1, sw se 3-14-20, rur. W. S. King's Wren 1, sw ne 6-13-22, dr 2400 ft. Walter Lown's P. C. Grayson 1, sw se 12-20-14, woc 105 ft. C. B. & F. Pet. Co.'s Haynie 1, 5-14-20, woc 1770 ft. A. M. Lacey's Bennett 1, sw ne 28-14-22, rur. Axel Larson's J. T. Wortham 1, sw nw 29-13-21, sd 2340 ft. W. E. Stewart's Mendenhall 1, nw ne 1-14-20, 10-in csg 105 ft, rep rig 400 ft. Berry Asphalt Co.'s B. Haynie 1, 6-20-14, sd 1176 ft; B. Haynie 2, se sw 6-14-20, lcn; William Haynie 1, ne sw 6-14-20, lcn.

OUACHITA COUNTY—Lion O. R. Co.'s Levy 1, 21-15-15, top Nacatosh 2138 ft, tested sw 4935-60 ft, sw, abn, td 5350 ft.

SEVIER COUNTY—J. C. Brinkley's Dierks Lbr. Co. 1, se ne 14-10-29, spd.

UNION COUNTY—Lion O. R. Co.'s Morgan 1, 18-18-17, dr 5192 ft lime. Ark. Southern Oil Co. Inc.'s G. G. Simmons 1, nw nw 15-18-13, rur.

CALIFORNIA

FRESNO COUNTY

CANTUA CREEK—Western Gulf's S. P. Land Co. 3, 3-17-15, td 8531 ft, redr to 8500 ft, bailing mud, water and oil.

KERN COUNTY

LERDO—Arkelo Pet. Co.'s Arkelo 1, 23-28-26, dr shale streaks sand 9012 ft.

ARVIN—Bear Mountain Oil Co.'s Tejon 1, 21-31-30, dr shale 550 ft. General Pet. Corp.'s Arvin 1, 26-31-29, td 7462 ft, swabbed 50 bbls net oil, plug 7454 ft, to swab.

SOUTH MARICOPA—E. A. Bender's Robinson 1, 14-10-23, sd 1235 ft, plug 550 ft. Trans-Line Pet. Corp.'s No. 1, 3-10-23, sd 662 ft.

PREMIER—Bojaki Oil Co.'s Bowes 1, 28-27-27, dr shale 1630 ft.

GREENFIELD—British American's Smith 1-A, 21-31-27, sd 1128 ft.

GRAPEVINE—Buffalo Oil Co.'s Tejon 1, 5-10-19, dr shale 4270 ft. Ohio Oil Co.'s Title Ins. D-1, 21-11-19, dr shale 6737 ft. Reserve Oil & Gas Co.'s Ritchie 33-1, 33-11-19, td 6030 ft, plug 4990 ft, sd; Tejon 33-2, td 4505 ft(redr to 4468 ft, set 6⅝ in at 4438 ft, to test; Tejon 33-3, td 4431 ft, shut in.

SAN EMIDIO—I. L. Burch's No. 1, 3-10-23, sd 2590 ft. Union's No. C-1, 24-11-22, dr gray sand 4238 ft.

MOUNT POSO—Calcoast Oil Co.'s No. 1, 36-26-27, td 2655 ft, abn.

WASCO—Continental Oil Co.'s K.C.L. 1, 8-27-24, td 9545 ft, fsh bailer. Seaboard Oil Corp.'s K.C.L. C-1, 26-27-24, dr shale 2647 ft.

ROSEDALE—Continental Oil Co.'s K.C.L. B-1, 12-29-26, dr sandy shale 4668 ft.

DEVIL'S DEN—Den Pet. Co.'s Bates 1, 20-25-19, sd 3280 ft. Lube Oil Co.'s No. 1, 2-25-18, dr brown shale 4052 ft.

JASMINE—Doyle Pet. Corp.'s Quinn 1, 15-25-27, td 2956 ft, plug 2882 ft, bailing; Quinn 2, spud March 1, dr.

MOUNTAIN VIEW—Mohawk Pet. Co.'s No. 3, 4-31-29, td 5356 ft, wocs 6fi in at 5132 ft.

RIO BRAVO—Mohawk Pet. Co.'s K.C.L. 1, 23-29-25, dr shale 1362 ft. Petroleum Securities Co.'s No. 1, 23-29-25, spud and sd. Tide Water Associated K.C.L. 1, 30-29-25, td 8615 ft, testing 6⅝ in casing. Union's Kern Co. 1-34, 34-28-25, foundation.

KERN FRONT—Seakayden Oil Co.'s No. 3-A, 17-28-27, td 2890 ft, plug 2870 ft, tested on pump 200 bbls, cut 60 percent, sanded up, co; No. 4-A, 17-28-27, td 2900 ft, in o.s. wocs 8⅝ in at 2877 ft.

TEN SECTION—Shell's Canal 21-14, 14-30-25, bldg rig. Superior Oil Co.'s K.C.L. 8, 11-30-26, td 10,489 ft, rigging heavier equip.

GOSFORD—Signal Oil & Gas Co.'s K.C.L. 1-A, 21-30-27, dr shale and sand 6670 ft.

McGUNDEY — Superior Oil Co.'s Crome Com. 1, 36-29-28, bldg roads.

MISCELLANEOUS

HUMBOLDT COUNTY—Texas Co.'s Eureka 1, 22-3-1, td 7418 ft, r.

KINGS COUNTY—Central Calif. Utilities Corp.'s Lakeview 3, td 1190 ft, wocs 6⅝ in at 1150 ft. A. S. Clare's Laymance 1, 20-20-22, rig. Dudley Ridge Dev. Co.'s No. 2, 24-23-20, foundation. Pyramid Prod. Co.'s Spreckles 2, 16-24-18, lcn. Glen C. Stone's Teeter 1, 27-20-20, dr sand 1260 ft. Tide Water Associated's Avenal 2, 35-23-17, td 1953 ft, redr.

SAN BENITO COUNTY—Tide Water Associated's Murphy Ranch 1, 5-12-4, td 6383 ft, wocs 8⅝ in on bottom.

SOLANO COUNTY—Amerada Pet. Corp.'s Drouin 2, 25-4-2, rur; Mayhood 1, 35-4-2, dr shale 3567 ft.

SUTTER COUNTY—Buttes Oilfields' No. 4, 2-15-1, td 5200 ft, formation tester at 5100 ft showed good for 15,000,000 cu ft, no oil. To test further.

TULARE COUNTY—J. W. Alford's Williams 1, 28-16-23, sd 1023 ft. R. R. Ellis' No. 1, 20-24-23, rig. E. P. Jennings' No. 1, 4-24-23, td 2709 ft, plug 2690 ft, to test; No. 2, 33-23-23, bldg rig.

MONTEREY COUNTY—Amil A. Anderson's No. 1, 15-24-14, td 680 ft, co. Shell's Branch 2, 34-24-10, dr shale 6878 ft. Texas Co.'s Dunphy 1, 30-19-7, dr shale 3035 ft.

SAN LUIS OBISPO COUNTY—Aviation Oil Co.'s Britnall 1, 10-11-35, sd 1639 ft. Barnsdall's K.C.L. A-1, 1-32-20, dr shale 450 ft. R. A. Foster's McKee 1, 2-32-23, sd 5087 ft. A. T. Jergins Trust's Indian Knob 1, 26-31-12, td 1438 ft, wocs 8⅝ in at 1436 ft. Temblor Oil Co.'s No. 1, 22-32-21, rur. Union's Porter 1, 22-32-15, dr hard shale 5010 ft. United Foreign Oil Co.'s Panorama 2, 2-32-21, sd 2438 ft.

SANTA BARBARA COUNTY—Julius Dietzman's Fithian 1, 8-4-25, sd 1025 ft. E. H. Moore's Union Sugar A-1, 25-10-35, dr fractured shale showing oil 8090 ft. Nine Springs Oil Co.'s Brinkerhoff 1, 9-7-30, td 3080 ft, co. W. D. Shaffer's Houk 1, 9-9-33, sd 5003 ft. Union's O'Donnell 1, 21-10-34, rig. Valley Oil Co.'s Chief 1, 20-9-34, dr shale 1620 ft.

VENTURA COUNTY—Continental Oil Co.'s Casitas 1, 7-3-23, dr hard sand 5638 ft. Speik Oil Co.'s Speik 1, 35-5-19, dr shale and oil sand 1910 ft. Vaca Oil Explor. Co.'s Lands 1, 6-1-21, sd 2830 ft. Ventura Explor. Co.'s Sexton 1, 30-3-22, sd 9525 ft.

SOUTHERN CALIFORNIA

NEWHALL—Barnsdall's Rancho S. F. 1, 26-4-17, td 6372 ft in oil sand, to blank off upper gas zone and test. Holbrook Pet. Co.'s Newhall Land 1, 28-4-16, dr hard brown shale 4360 ft.

PICO CANYON—A. G. Burt's No. 1, 36-4-17, dr shale 340 ft.

LYNWOOD—Calizoo Oil Co.'s Saulque 1, 9-3-13, sd 3995 ft.

NO. LONG BEACH—Geo. L. Clayton's Clayton 1, 32-3-12, dr sand and shale 2970 ft.

FOX HILLS AREA — Country Club Oil Co.'s No. 1, dr sand streaks shale 2520 ft.

EAST WHITTIER—Drillers Inc.'s No. 1, 22-2-11, td 980 ft, running casing.

MONTEBELLO—Danciger Oil & Ref. Co.'s Baldwin 1, 11-2-11, lcn.

CLEARWATER—H. Heide's Rogers 1, 20-3-12, partly rigged up.

WEST COYOTE—Hogan Pet. Co.'s McNally 1, 23-3-11, rur.

PUENTE—Honolulu Oil Corp.'s Butler 1, 15-2-10, dr sand and shale 3435 ft.

TORRANCE — Imperial Gypsum & Oil Corp.'s McDowell 1, 35-3-14, td 7210 ft, abn.

WALNUT—Julian & Criswell's Langstaff 1, 5-2-9, dr shale streaks hard sand 1275 ft.

HERMOSA BEACH—Leora Oil Co.'s No. 1, 31-3-14, dr hard shale 4560 ft, ran formation tester.

PALOS VERDES HILLS—McClaren Bros.' No. 1, 27-4-14, td 3990 ft, redr at 1800 ft.

ANAHEIM—Shell's Mathis 1, 23-4-10, dr shale 3925 ft.

ROSECRANS—Shell's McKinley 4-1, 20-3-13, td 7744 ft, wocs 8⅝ in at 7458 ft.

HAWTHORNE — Signal Finance Corp.'s Woods 1, 10-3-14, td 9395 ft, trying to locate water.

CULVER CITY—Vincent Pet. Co.'s Harriett 1, 12-2-15, rigged and idle.

DAVIDSON CITY — C. G. Willis' Flood Control 1, 11-4-13, td 5890 ft, redr to 5685 ft, 5¾ in at 5669 ft, to dr out.

ORANGE COUNTY—Mesa Oil Co.'s Mesa 1, 29-6-10, td 6051 ft, running sleeve liner to 2800 ft.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*	owdd—*old well drilling deeper.*
‡—*salt water (completions).*	owpb—*old well plugging back.*
†—*junked and abandoned.*	pb—*plugged back or plugging back.*
¶—*million feet of gas.*	r—*reaming.*
abd—*abandoned.*	rog—*rig on the ground.*
bbls—*barrels.*	rur—*rigging up rotary tools.*
br—*building rig.*	rust—*rigging up standard tools.*
b.s.—*basic sediment.*	sd—*shut down.*
csg—*casing.*	sdtr—*sidetracking.*
co—*cleaning out.*	sg—*show gas.*
dd—*drilling deeper.*	si—*shut in.*
dk—*derrick.*	so—*show oil.*
dr—*drilling.*	so&g—*show oil and gas.*
fsg—*fishing.*	spd—*spudding.*
ft—*feet.*	sr—*straight reaming.*
hfw—*hole full of water.*	sw—*salt water.*
in—*inches.*	td—*total depth.*
lcn—*location.*	ur—*underreaming.*
m—*milling.*	wih—*water in the hole.*
mim—*moving in materials.*	wo—*workover.*
mit—*moving in tools.*	wocs—*waiting on cement to set.*
mot—*milling on tools.*	wosr—*waiting on standard rig.*
n, s, e, w—*north, south, east, west.*	
oih—*oil in hole.*	

KANSAS

BARTON COUNTY—Duce & Brouk's Baker 1, ne se sw 16-17s-13w, hfw 3491 ft, td 3500 ft. I.T.I.O. Co.'s Schrepel 1, se se ne 26-20s-11w, co 3033 ft. Herndon Drlg. Co. & Morgan & Flynn's Robenseifer 1, cnw 7-18s-15w, sd 430 ft. Stanolind's Burmeister 1, ne ne sw 33-19s-11w, bail 1½ bbls oil and ½ bbl wtr per hour. C. L. Price et al's Kraft 1, sw nw ne 10-17s-11w, dr 1855 ft. C. L. Carlock's Leibel 1, se ne se 18-18s-11w, ur 12-in csg 685 ft. Missouri Valley O&G Co.'s Peach 1, se se se 24-16s-14w, dr 1015 ft. Ralph Wixon & Union O&R Co.'s Frederick 1, nw nw nw 12-16s-13w, rig. John Burton et al's Wendel 1, ne ne ne 13-19s-11w, dr 3050 ft.

BUTLER COUNTY — Cox & McGinnis' Faulders 1, sw sw ne 27-25s-3e, td 3277 ft, D&A. A. M. Landon et al's McCaig 1, ne ne se 13-28s-6e, dr 765 ft. C. L. Seibel et al's Bisagno 1, se se nw 24-25s-6e, mi mach.

CHASE COUNTY—Hann et al's Brothers 1, se se nw 25-20s-8w, co 2590 ft.

CHAUTAUQUA COUNTY—Brosius et al's Morris 1, sw nw sw 6-32s-12e, td 2165 ft, D&A.

COWLEY COUNTY — W. M. McKnabb's Weldschmidt 1, sw sw nw 18-34s-6e, dr 2440 ft. McKnabb's Community 1, cne nw 14-34s-3e, dr 3260 ft. Wentz & Amerada's Rush 1, nw sw sw 36-34s-6e, dr 1258 ft. Tom Palmer's Lowe 1-A, sw se se 3-32s-5e. ru.

DECATUR COUNTY—Winkler & Koch's Vessey 1, cnw se 26-2s-26w, sd 4007 ft.

ELLIS COUNTY—Empire's Samuelson 1, ne ne ne 31-11s-16w, woc. Murphy Oil Co.'s Weisner 1, se se sw 12-14s-19w, ur 8-in csg 3185 ft. Lario O&G Co.'s Cress 1, ne ne ne 13-11s-17w, cor. Empire, Hall 1, se se se 2-12s-17w, set 8-in csg 2884 ft. Sunray Oil Co.'s Befort 1, ne ne ne 11-14s-20w ur 6-in csg 3550 ft. Winkler & Koch's Jensen 1 sw sw ne 3-13s-18w sd 80 ft. Mazda Oil Co.'s Henderson 1 sw sw ne 27-11s-18w ru. Noble Pet. Corp.'s O'Laughlin 1 nw nw se 13-12s-19w set 20-in csg 340 ft. Earl Wakefield's Putnam Mort Co. 1 se se nw 32-15s-17w rig. Ted Kors et al's Koblitz 1 se sw nw 23-12s-18w testing.

ELLSWORTH COUNTY—Frost et al's Dolechek 1 ne ne sw 36-14s-8w sd 300 ft.

FINNEY COUNTY—Keith & Olson Drlg. Co.'s Ely 1 nw nw sw 34-22s-29w dr 2270 ft.

GRANT COUNTY — Columbian Fuel Co.'s Gray 1 cse 3-29s-35w set 8-in csg 2500 ft woc.

GREENWOOD COUNTY—Ohio Oil Co.'s Schwab 1 se sw se 9-24s-10e set 5-in csg 2740 ft co.

HARPER COUNTY—Carter Oil Co. et al's Seihart Estate 1 csw nw 4-34s-8w rur.

HARVEY COUNTY—Harburney Oil Co.'s Schragg 1 nw nw se 24-22s-3w fsg 3711 ft.

HASKELL COUNTY—Kuhn Bros. et al's Meredith 1, csw¼ 10-30s-33w, hole bridged at 2500 ft co.

KINGMAN COUNTY—Shell Pet. Corp.'s McMichael 1 cw½ w½ sw 12-27s-10w dr 4487 ft.

LANE COUNTY—K. C. Bates' Bates-Nimocks 1 cnw ne 16-16s-28w td 5121 ft D&A.

LOGAN COUNTY—Rosespring Drlg. Co. et al's Wright 1 cse se 12-15s-35w dr 2700 ft.

LYON COUNTY—Clyde Fred et al's Bruce 1 nw nw nw 13-18s-10e woc.

McPHERSON COUNTY—Hutchinson O&G Co. et al's Berg 1 sw sw se 15-20s-3w fsg 1685 ft. Wamhoff et al's Nuse 1 se se sw 18-18s-4w rur. Smith et al's Larson 1 nw nw sw 35-18s-5w mim. Bradley Bros.' Barnholdt 1 sw sw se 30-20s-5w br. Fred C. Frank et al's Doles 1 se nw ne 12-19s-1w spd.

NESS COUNTY—Newton Dev. Co.'s Tenny 1 nw nw se 19-18s-25w dr 3810 ft.

RENO COUNTY—Clyde Pulse et al's Payne 1 sw nw ne 4-22s-7w dr 3342 ft. Foraker et al's Hiett 1 se sw ne 34-24s-4w co 3880 ft. Helmerich & Payne et al's Evans 1 ne ne se 29-24s-6w rot rig. Helmerich & Payne's Benson 1 ne ne ne 5-25s-6w cor. Atlantic's Page 1 se nw nw 19-23s-7w dr 3087 ft. Olson Drlg Co. et al's Herriman 1 nw nw nw 22-24s-8w rot rig.

RICE COUNTY—Empire's Banterton 1, se sw se 11-18s-8w, Pot. P. 268 bbls oil, 24 hrs. Continental et al's Michells 1, ne ne sw 12-18s-2w, dr 2530 ft. T. C. Johnson's Schubert 1, sw sw sw 9-20s-10w dr 1500 ft. L. C. Douglas' Coyne 1 ne se se 24-21s-8w, dr 975 ft. John Hanna et al's Fulton 1, nw nw ne 24-19s-6w, dr 205 ft. Manning, Martin et al's Mathes 1, se sw ne 27-21s-8w, rur. Roy Ramsey et al's Malone 1 nw nw ne 1-20s-10w dr 700 ft. Carlock et al's Deweese 1, sw nw nw 32-20s-7w, td 3675 ft, D&A.

ROOKS COUNTY—Snowden & McSweeney's Hindman 1, ce½ nw 35-7s-17w, testing. Graham et al's Fike 1, sw sw sw 9-9s-17w, td 3301 ft. Basin Oil Co.'s Baxa 1 ne ne ne 23-9s-17w, sd 2000 ft. Lester & Dean's Burtt 1, se se ne 29-10s-20w, fsg 3422 ft. Phillips Pet. Co.'s Manquist 1, sw sw nw 9-9s-17w, ru. Jones Bros. Drlg. Co.'s Wiss 1, nw nw nw 8-10s-8w, dr 50 ft.

RUSH COUNTY—S. A. Murphy et al's Roth 1, nw nw sw 21-16s-18w, set 15-in csg 445 ft.

RUSSELL COUNTY—Empire's Vaughn 1, sw sw sw 17-14s-14w, set 10-inch csg 2497 ft, co.

SALINE COUNTY — Ryan Consolidated's Weurth 1, sw sw nw 28-14s-2w, fsh 1870 ft.

SEDGWICK COUNTY — Cameron et al's Smith 1, sw se se 13-27s-2e, dr 2480 ft. Swearer et al's Thome 1, sw sw nw 19-28s-1w, rur. Roxana Drlg. Co. et al's Woodman 1, sw nw sw 26-26s-1w, rur.

STAFFORD COUNTY—Empire's Jordan 1, sw sw nw 15-25s-14w, cor. Empire's O'Conner 1, ne ne ne 17-24s-15w, rust. Young et al's Murphy 1-A, se nw ne 32-21s-11w, fsg 1380 ft. Trigg & Vernon O&G Co.'s Andrea 1, se se se 4-23s-12w, rur. Rosespring Drlg. Co.'s Gray 1, nw nw nw 11-24s-13w, mi rig.

SUMNER COUNTY—Wakefield & Mead Oil Co.'s Napp 1, sw sw nw 2-34s-5e, so & w, dr ahead. Westfall et al's Rogers 1, sw ne sw 35-31s-1w, to core, 3822 ft. Graham et al's Dawson 1, nw nw nw 4-33s-2w, dr by 3000 ft.

TREGO COUNTY — Central Commercial's Burkett 1, csw 15-11s-22w, hfw 4239 ft. Black Gold Oil Co.'s Allman 1, csw sw 34-14s-21w, dr 2620 ft.

WOODSON COUNTY—Reamers' Corn 1, ne ne ne 31-36s-15e, dr 1820 ft. C. L. Sheedy's Fulhage 1, cs½ nw se 27-25s-14e, dr 725 ft.

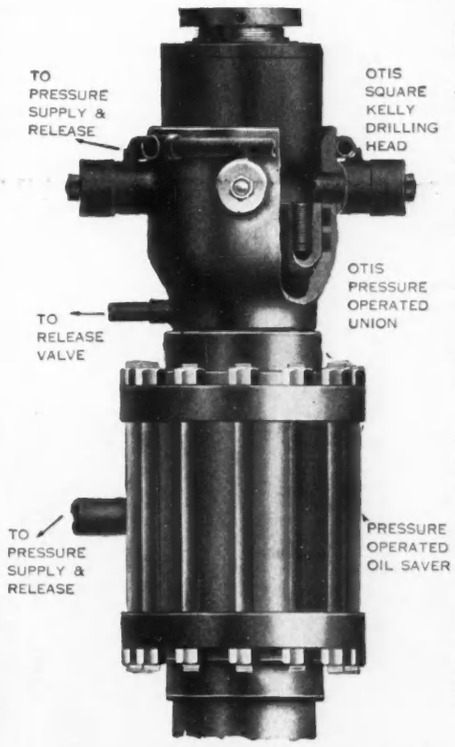
NORTH LOUISIANA

BIENVILLE PARISH—Lide, Greer et al's Smelley 1, sw ne 13-16n-5w, elev 239 ft, base massive anhydrite 5640 ft, tested est 50 mil ft gas & spray distillate 7163-93 ft, tested est 30 mil ft gas 7205-40 ft, coring 7650 ft; W. J. Smelley 1, se nw sw 18-12n-6w, lcn. McDowell et al's Locke 1, 9-15n-10w, dr 2376 ft lime. DeSoto O & G Co.'s William Ashley 1, sw se 15-16n-10w, mim. Texas-Seaboard Oil Co.'s McGee 1, 3-16n-6w, 7 in csg 7537 ft, tested gas after perforating csg at 7323-33 ft, at 7345-55 ft and 7448-62 ft, perf csg & tested est 2½ mil ft gas at 6665-95 ft in basal Glen Rose, td 8017 ft, si for gauge.

BOSSIER PARISH—Ark.-La. Gas Co.'s Wilson 1, sw se sw 8-17n-11w, dr 1325 ft; Hardeman 1, 6-17n-11w, dr 4157 ft. Haynes Drlg Co.'s A. J. Murff 1, 35-17n-12w, dr 4390 ft. La. Pet. Corp.'s Edwards 1, 5-17n-11w, completed as gasser, si for gauge td 5184 ft. Triangle Drlg. Co.'s Skannal 1-1, 22-17n-12w, si for gauge 5170 ft. H. L. Skannal H-1, sw sw 23-17n-12w, no report. United's Skannal H-1, 26-17n-12w, top Petitt 5120 ft, flowed 5 bbls oil per hour through ⅛ inch choke, tub press

NOT A Warning BUT A Reminder

TO OPERATORS IN THE FOLLOWING FIELDS


TO PRESSURE SUPPLY & RELEASE
OTIS SQUARE KELLY DRILLING HEAD
OTIS PRESSURE OPERATED UNION
TO RELEASE VALVE
TO PRESSURE SUPPLY & RELEASE
PRESSURE OPERATED OIL SAVER

- √ CORPUS CHRISTI
- √ RODESSA
- √ WEST TEXAS
- √ HOBBS
- √ OKLAHOMA

The Otis Square Kelly Drilling Head along with the Otis Pressure Operated Union gives you not one but two very profitable applications. This assembly not only serves for drilling in under pressure control but for use as a Square Kelly Blow-out Preventer. Advantages of drilling in under pressure control are many. Reduced drilling time; no mud intrusion of the producing horizons; more accurate knowledge of formations being drilled and for greater safety are only a few. This modern, thoroughly proven, assembly therefore fills the bill for you whether you are combatting extremely high pressures, or (perhaps in the same field) your pressure has declined to a point where it is not advisable to use a heavy mud column and endanger your pay sand. In numerous cases this Otis assembly is coping with one or both of the above applications equally well in the same field.

OTIS — PRESSURE CONTROL SERVICE - EQUIPMENT

Headquarters: **Tower Petroleum Bldg., Dallas, Texas**
Branches: **Houston, Shreveport, Oklahoma City, Ada, Hobbs**

200 pounds cas pres 900 pounds, treated with acid, si td 5144 ft; Skannal I-1, sw sw 25-17n-12w, mim; Freedman 1, 15-17n-12w, pb to 4380 ft, completed as gasser, wo gauge old td 5130 ft; Henderson 1, 36-17n-12w, dr 4378 ft; Webb Unit 1, C 23-17n-12w, rur.

CADDO PARISH—Fallon Oil Co.'s Cupples 1, 24-16n-13w, cemtd 10⅝ in csg 2000 ft, woc td 4001 ft. Ferguson et al's Huckabay 1, 22-22n-16w, 8 in csg 1130 ft, tested dry 1137 ft, arr deepen. W. J. Hunter's Stoer 1, nw se 10-15-15, mim. Gulf's E. P. Hatcher 1, 11-17n-15w, elev 269 ft, 7 in csg 8307 ft, ran electrical tester to 8994 ft, fsg 8997 ft lime. R. W. Norton's Payne 1, se se 27-23n-16w, coring 8481 ft.

CLAIBORNE PARISH—Max Hirsch et al's C. O. Ferguson 1, nw sw 29-22n-6w, sw abn at 6147 ft after running electrical tester. Lisbon Oil Co.'s J. W. Burgess 1, se ne 3-20n-5w, elev 354 ft, base massive anhydrite 4212 ft, dr 4640 ft shale. Lyons & Neely's Patton 1, nw sw 36-21n-5w, dr 4062 ft anhydrite. Oden & Evans' Patton 1, se se 36-21n-5w, elev 355 ft, top first anhydrite 3812 ft, massive anhydrite 4030-4232 ft, coring 4595 ft. Red Iron Drlg. Co.'s H. F. Patton 1, sw ne 36-21n-5w, 10 in csg 850 ft, dr 4050 ft; H. F. Patton 2, 36-21n 5w, lcn; T. E. Patton 1, 36-21n- 5w, lcn; McDonald 1, 36-21n-5w, lcn. Standard of La.'s R. D. Baker 1, sw nw 27-19n-7w, 13 in csg 285 ft, 9⅝ in csg 3162 ft, dr 3220 ft. United's Warren Brown 1, se ne 1-19n-6w, dr 5904 ft, drill stem 5750-5850 showed only mud; Rufus Simms 1, sw nw 32-20n-5w, si for gauge, td 5714 ft.

CATAHOULA PARISH—Balconies Oil Co.'s T. J. Chisum 1, 19-10n-8e, rur. Matheny & Schumacher's W. S. Peck 1, 40-10n-8e, mim.

DESOTO PARISH—Sundby et al's Garland 1, se nw 7-14n-14w, elev 300 ft, top anhydrite stringer 4228 ft, dr 4320 ft. Benedum & Trees Oil Co.'s Clifton 1, ne nw 33-13n-12w, 12¾ in csg 1010 ft., dr 2990 ft shale. Julian-Igoe Synd's H. Smith 1, se se 31-14n-15w, lcn. Sanders et al's Allison 1, 17-14n-13w, mim. Chamberlin et al's Lanier 1, 29-11n-11w, dk. Grady Vaughn et al's Sample 1, ne se 24-11n-14w, owdd 5955 ft. Pearl Oil Corp.'s Joyner 1, 28-11n-12w, cored sand so 2887-90 ft, 8¼ in csg 2885 ft, dr plug sd for drilling line, td 2899 ft shale. Lee Oil Corp.'s Mansfield Pet. Co. 1, se se 13-10n-14w, dk. Grogan Oil Co.'s Ramsey 1, 36-11n-11w, sd 2800 ft.

NATCHITOCHES PARISH—Lent et al's Locke 1, se sw 26-9n-9w, sd 30 ft. Robt. Keen's Moffitt 1, 19-10n-10w, rur.

RAPIDES PARISH—R. D. Webb's Brasher 1, 22-4n-2w, dr 2822 ft.

RICHLAND PARISH—Gulf's R. R. Rhymes 15, se se 32-17n-6e, elev 87 ft, dr 9745 ft.

WEBSTER PARISH—Ohio Oil Co.'s S. T. D. Coyle 1, se sw 23-21n-10w, ran electrical tester, td 5570 ft. Ohio's R. M. Coyle 2, se se 22-21n-10w, rur. A. H. Gray 1, Acct 2, nw nw 26-21n-10w, tested est 25 mil ft, td 5540 ft. Hodges 2, nw sw 23-21n-10w, woc 5580 ft. United's C. V. Davis 2, nw nw 23-21n-10w, tested show 54 grav distillate & 3½ mil ft gas 8262-8300 ft, 5 in csg 8520 ft, woc, td 8554 ft. United's Mixon 1, 22-21n-10w, sd 8231 ft. Woodley Pet. Co.'s Gray B-4, ne ne 27-21n-10w, tested small amt gas 5595 ft, arr deepen. Standard of La.'s Fudicker 1, 2-17n-9w, top Travis Peak 6881 ft, perf csg tested sw 4615-31 ft, arr perf again, td 7202 ft.

WINN PARISH—C. W. Cline's Collinsworth Hrs. 1, se se 14-10n-4w, dk & mir.

SOUTH LOUISIANA

ACADIA PARISH—H. E. Dalton's Setting 1, Trilby prospect, 17-9s-1w, reaming 3200 ft. Humble's Nordyke 1, Ebenezer prospect 23-10s-1e, dr sand 8893 ft.

CALCASIEU PARISH—D. & D. Oil Co.'s Lutcher Moore 1, nw of Starks, 1-8s-13w, dr shale 8009 ft.

CAMERON PARISH—Pure's State Mallard Bay 1, Mallard Bay prospect, 22-13s-3w, fsh 10,146 ft. Union Sulphur's Hebert 1, Big Lake area, 18-12s-8w, dr water sand 6641 ft.

EAST FELICIANA PARISH—Cavalier Oil Co.'s T. E. Mills 1, near Port Hudson, 58-4s-2w, abn 5292 ft. Barnett Pet. Corp.'s Tullos 1, near Jackson, 34-2s-1w, dr shale 6010 ft.

EVANGELINE PARISH — Bel Cheney Springs Oil Co.'s Fee 1, 10-2s-1w, sd 1723 ft. Continental & Humble's Pardee Lbr. Co. 1, Reddell area, 18-4s-1w, dr shale 4199 ft. Louisiana Crusaders Oil Co.'s Hatti Hass 1, ne of Pine Prairie, 2-3s-1e, abn 7506 ft.

IBERIA PARISH — Texas Co.'s State 2, Fausse Point area, 35-11s-8e, comp 16 bbls daily, 6550 ft. Jefferson Lake Oil Co.'s Lake Peigneur 414, Lake Peigneur prospect, 12s-5e, testing 6945 ft.

JEFFERSON PARISH—Triangle Oil Co.'s Carroll 1, 125-12s-11e, sd 2461 ft.

JEFFERSON DAVIS PARISH — Amerada-Stanolind's Calcasieu National Bank 1, China prospect, 28-7s-3w, fsh 9139 ft. Shell's Sturdevant 1, South Roanoke prospect, 25-10s-4w, to dr deeper 8630 ft. Stanolind's United Life insurance 1, Hayes prospect, 16-11s-5w, dr shale 1856 ft.

LAFOURCHE PARISH—Fohs Oil Co.'s State Long Lake 1, in Long Lake, 65-17s-19e, dr shale 3010 ft. William Helis' City of New Orleans 1, Marchland prospect, 19-23s-23e, dr hard sand 6527 ft.

PLAQUEMINES PARISH—Tide Water Associated Oil Co.'s Manhatten Fruit 2, Venice dome, 26-21s-30e, dr in sdtr hole 2830 ft. Gulf's State Bay Adams "PP", in Bay Adams, 32-19s-28e, dr shale 3687 ft.

ST. BERNARD PARISH—Gulf's Lake Lery 1, Lake Lery prospect, 28-14s-14e, dr gravel and shale 5316 ft. Southern Sulphur Co.'s State 2, Lake Borgne area, 38-14w-15e, dr shale 2287 ft.

ST. LANDRY PARISH—Shell's Boagni 1, ne of Cankton, 48-8s-4e, ru.

ST. MARTIN PARISH—Stanolind's Numa Patin 1, Anse La Butte, 46-9s-5e, washing 6147 ft. Texas Co.'s State Mongouloi 3, Lake Mongouloi prospect, 14-10s-9e, dr gravel 325 ft; same operator's St. Martin Land Co. 9, Henderson prospect, 21-8s-7e, dr shale 8561 ft.

ST. MARY PARISH — Texas Co.'s State Bateman Bay 1, Morgan City prospect, 21-16s-12e, dr sand and gravel, 878 ft; same operator's State Wax Lake, Wax Lake prospect, 40-17s-9e, setting csg 10,975 ft.

TERREBONNE PARISH—Humble's Elender 1, Houba Gas field, 23-19s-19e, dr shale 10,002 ft.

VERMILION PARISH—Continental's Hebert 1, Abbeville prospect, 20-12s-3e, testing 7675 ft.

MICHIGAN

ARENAC COUNTY—Mee & Wright's Yawkey 1, 28-18n-4e, dr 600 ft. Petroleum Corp.'s LaFave 1, 17-18n-5e, sd 1800 ft.

GLADWIN COUNTY — Bell & Marks' Keyes 1, nw sw nw 9-17n-1e, rig. McClanahan Oil Co.'s Avery 1, 10-17n-1e, dr 1100 ft. Cryden Pet. Corp.'s Gary 1, 34-19n-1w, dr 160 ft. Gordon Oil Co.'s McClure 1, 25-19n-2w, dr 300 ft.

MONTCALM COUNTY—Charles Weller's Herzog 1, 14-12n-8w, dr 1600 ft. R. E. Gallagher's Hayden 1, 25-9n-8w, sd 3360 ft.

WASTHENAW COUNTY — Lee Brown's Kehrl 1, 12-1s-7e, sd 3850 ft. Ypsilanti Development's Vorhees 1, 32-2s-7e, dr 1650 ft.

WAYNE COUNTY—Drake Brothers' Truesdell 1, 25-2s-8e, dr 1100 ft. Wolverine Driller's

UNUSUAL: Ice on the
CALIFORNIA ORANGE TREES
but
SHEAR-RELIEF VALVES
ON CALIFORNIA SLUSH PUMPS
is a common sight!
Slush pumps on this wildcat location in an orange grove near Anaheim, California, are well protected by Abercrombie SHEAR-RELIEF Valves, this operator's insurance against the hazards of excess pressure. As you know, the nail shears if pump pressure reaches the set point, and the nail is the only damage. And note in the picture why anyone can't go wrong in setting. The nameplate not only shows nail sizes for given pressures, but the nail gauge eliminates any chance of mistaking nail sizes.
ABERCROMBIE PUMP CO.
HOUSTON TEX.
GULF BLDG.

Gardulski 1, 19-2s-9e, dr 950 ft. Pontchartrain Corp.'s Boynton 1, 27-4s-8e, dr 1900 ft. Huron River Valley Corp.'s Scheffler 1, 26-3s-8e, sd 1200 ft.

CLARE COUNTY—Wittmer Oil Co.'s Musgrave 1, 3-18n-5w, dr 2300 ft.

GRATIOT COUNTY—H. B. Cowdrey's DeVuyst 1, 11-10n-2w, rig.

HILLSDALE COUNTY—Hughes Heinig's Daley 1, 10-7s-4w, dr 1790 ft.

IONIA COUNTY—Boston Oil & Gas Co.'s Marshall 1, 6-8n-6w, mim.

ISABELLA COUNTY—Socony-Vacuum Oil Co.'s Murphy 1, 6-16n-3w, rig.

TUSCOLA COUNTY — Smith Petroleum Corp.'s Brink 1, 23-14n-7e, sd 2800 ft.

MISSISSIPPI

AMITE COUNTY — J. P. Wemple, Tr.'s Southern Forest Land Co. 1, sw sw 29-4n-2e, spd woc 10-in csg 850 ft.

GRENADA COUNTY—H. T. Salter et al's Carpenter 1, nw se 5-21n-7e, arr rebld dk.

HARRISON COUNTY—Bog Ridge Oil Co.'s Hingen 1, se se 13-7n-10w, co 2150 ft.

JONES COUNTY—Snow-Black Pet. Co.'s Cranford 1, s½ nw 29-7n-12w, woc 15-in csg.

KEMPER COUNTY—R. A. Keaton's Buckwalter Lbr. Co. 1, nec 6-10n-14e, dk.

LAMAR COUNTY—Sun Oil Co. et al's Mrs. K. Talley 1, se sw 28-4n-15w, 13⅜ in csg 244 ft, dr 1108 ft.

SIMPSON COUNTY—Goodwill O&G Co.'s Berry 1, 33-2n-4e, rog.

YALABOUSHA COUNTY—G. M. Langston et al's W. C. Bryant 1, ne sw 21-24n-6e, dk.

OKLAHOMA

ATOKA COUNTY—A. J. Sanders' Redden 3, se sw sw 19-1n-5e, mirt, 1275 ft, td.

BECKHAM COUNTY—Carter Oil Co.'s Garrett 1, ne ne ne 11-17n-25w, dr 965 ft. Mid-American Oil Co.'s Biscoe 1-A, sw sw sw 28-8n-22w, dr 165 ft.

CADDO COUNTY — Clyde Becker et al's Pharris 1, cse se nw 24-6n-12w, der corners.

CARTER COUNTY—Lyle-Wham Dev. Co.'s Jackson 1, cne sw sw 26-5s-1e, dr 864 ft, Helmerich & Payne's Wolverton 1, se ne nw 21-3s-1w, lcn.

CHOCTAW COUNTY—Cooper & Branstetters' Bell 1, cnw ne 29-6s-17e, sd.

CLEVELAND COUNTY—Hollenback's Stinson 1, nw nw ne 17-9n-2w, dig C & P, sd.

COAL COUNTY—Ruwaldt & Couch's McMillan 1, sw sw sw 10-1s-8e, td 1340 ft.

COMANCHE COUNTY — Frank Scott's Kuntz 1-A, cse ne se 21-4n-11w, sd 2210 ft. C. V. Morris' Young 1, se ne se 24-3n-10w, fsg 822 ft.

CREEK COUNTY—J. E. Crosbie & Sinclair Prairie's Bailey 1, ne nw nw 28-16n-8e, dr 2850 ft. W. J. Sherry's Childers 1, sw sw nw 2-15n-7e, dr 845 ft. M. W. Mosier et al's Holcomb 1, se sw ne 19-18n-8e, bailing 2929 ft.

GARFIELD COUNTY — Arab Oil Co.'s Harkendorf 1, ne ne ne 34-20n-3w, pb to 1400 ft, woc.

GRADY COUNTY—R. E. Johnson et al's Thomas 1, sw se sw 18-5n-7e, mir. Western White Lily Oil Co.'s Stover 1, cse sw nw 33-3n-7w, rur.

HARMON COUNTY—Lioalko Trust Ltd.'s Crosnoe 1, se se sw 14-3n-25w, dr 3222 ft.

HUGHES COUNTY—Carson Oil Co.'s Lyter 1, ne nw sw 31-8n-12e, dr 4410 ft. Mid West Oil Co.'s Turner-Lucas 1, cse nw 13-9n-9e, sd 2942 ft. Wrightsman's Diamond 1-A, se ne ne se 33-9n-9e, dr 2990 ft.

JEFFERSON COUNTY—Buffalo Oil Co.'s Crown-Over 1, cse se nw 21-6s-6w, dr 1400 ft. Massed & Swansberger's Barrett 1, ne se se 14-6s-6w, sd 1538 ft. Olson, Heenan & Coe Oil Co.'s Rose 1, csw sw 1-5s-5w, der. Cap. Fields et al's Trout 1, ne ne sw 5-8s-7w, ru rot.

JOHNSTON COUNTY—Patton et al's McCrummens 1, sw sw ne 16-1s-6e, dr 1155 ft.

KAY COUNTY—G. A. Brown et al's Harris 1-A, sw sw ne 14-25n-1e, sd. Ritz O & G Co.'s State 1, nw ne sw 16-29n-2w, dr 4300 ft.

KIOWA COUNTY—McWherter & Francis' Padgett 1, ne nw se 3-5n-17w, sd 610 ft. Argus Pet. Co.'s Osbourne 1, nw nw ne 9-7n-16w, fsg 1225 ft.

LINCOLN COUNTY — Mid-Continent Pet. Corp.'s Logan 1, ne ne se 31-11n-5e, td 3324 ft, D&A. Anderson-Prichard's Colon 1, nw se sw 28-17n-4e, rng csg. Mid-Continent Pet. Corp.'s Logan 1-A, ne ne se 31-11n-5e, spd.

LOGAN COUNTY — Harry Blackstock's Prince 1, se ne sw 11-17n-3w, dr 5632 ft. Helmerich & Payne et al's Ruck 1, cne se 9-19n-2w, rust.

LOVE COUNTY—Sinclair Prairie's Stockton 1, se se sw 26-6s-2d, fsg 6927 ft. Sadson-Wells-Pierson's Key 1, cse se nw 6-8s-1w, dr 54 ft.

MARSHALL COUNTY—Stewart & Taylor's Chestnut 1, ne ne ne 23-8s-5e, ur 5 in csg 803 ft.

MURRAY COUNTY—Russell's Fee 1, se nw se 9-2s-3e, dr up ur lugs. Power Oil Co. et al's Lancaster Trust Co. 1, csw ne 10-1s-2e, fsg 3438 ft.

NOBLE COUNTY—Lincoln Oil Co. et al's Neil 1-A, ne ne ne 15-23n-2w, dig C & P.

OSAGE COUNTY—Norbla Oil Co.'s No. 1, ne ne se 13-23n-6e, fsg 760 ft.

PAWNEE COUNTY—Forest Dev. Co.'s Greisel 1, cnw ne 21-21n-5e, set 7 in csg 3231 ft. Forest's Markham 1, sw ne se 10-21n-5e, rig.

PAYNE COUNTY—H. F. Young's Jenkins 1, se ne se 4-17n-3e, dr 4595 ft. Bill Riddle's Van Zandt 1, nw nw se 16-18n-3e, lcn.

PITTSBURGH COUNTY—Okla. Dist. Co.'s Beeler 1, ne ne sw 7-7n-14e, dr 5138 ft.

PONTOTOC COUNTY—E. H. Moore's Muse 1, sw ne se 33-2n-7e, woc 4360 ft.

POTTAWATOMIE COUNTY — Champlin Ref. Co.'s Buckler 1, se ne ne 7-6n-4e, mir. B. H. Rowlett et al's Burson 1, sw sw ne 21-9n-4e, lcn.

PUSHMATAHA COUNTY—Erle Halliburton et al's Bogwell 1, sw ne ne 30-3s-15e, woc 840 ft.

SEMINOLE COUNTY—Hudson et al's Tanyan 1, se se sw 32-10n-7e, rig. Sinclair Prairie's Rossanna 1, nw nw sw 28-10n-8e, dr 3239 ft. Papoose Oil Co. et al's Yarber 1, sw sw nw 15-11n-8e, dr 3030 ft. Amerada & Stanolind's Face 1-A, sw sw sw 12-9n-7e, dr 765 ft. J. E. Hall et al's White 1, se nw se 30-6n-8e, dr 380 ft.

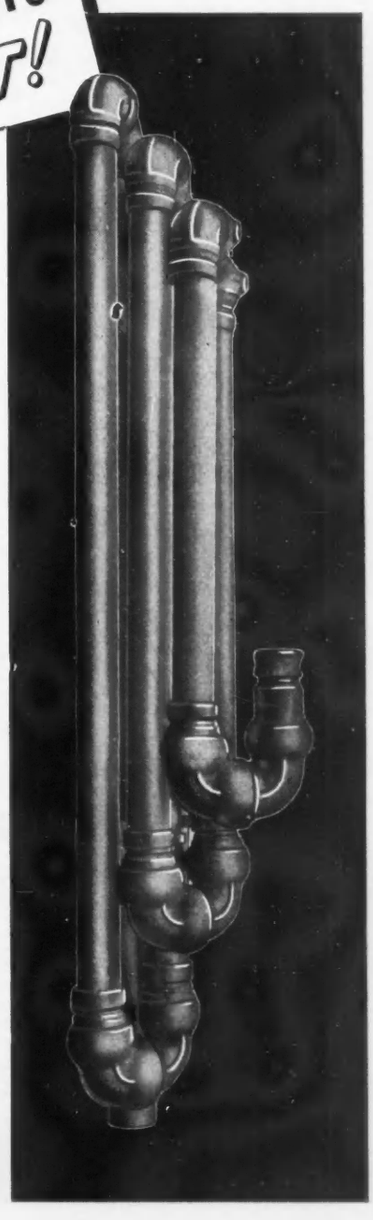
STEPHENS COUNTY — Coline Oil Co.'s Johnson 1, csw se nw 1-2n-8w, sdo 6500 ft. Edward's Frederick 1, ne se nw 31-2n-8w, woc 2800 ft. Carter's Harley 1, cne ne 24-2s-4w, cor. Wm. Angle et al's Posey 1, cnw nw 8-1n-8w, dr 3995 ft. Helmerich & Payne's Graham 1, csw sw ne 12-1n-5w, dr 3770 ft. Ed Parson's Olson 1, csw sw 21-2n-8w, td 7002 ft, to test. Angle & Angle's Irvine 1, csw sw ne 24-1n-7w, lcn abd. B. F. Lundy's Calmes 1, cnw sw se 35-1n-4w, rng surf pipe, 35 ft. Penn State Oil Co.'s Cole 1, cw½ sw nw 21-2n-8w, lcn.

TEXAS COUNTY—Cabot Carbon Co.'s Castro 1, cne 19-3n-17ecm, dr 2356 ft. Missouri Valley Gas Corp.'s Fitzgerald 1, C Sec. 17-6n-14ecm, rig.

TILLMAN COUNTY—I.T.I.O. Co.'s Hatler 1, csw ne 32-2s-17w, ru pump. Skinner's Oliver 1, se se nw 22-1s-15w, sdo 1378 ft.

WASHITA COUNTY — McWherter et al's Fee 1, sw sw sw 34-8n-19w, sd 1754 ft. John Koberg's Harms 1, cnw nw ne 6-10n-16w, bldg der.

STOP BUYING ROTARY HOSE....MAKE THIS INVESTMENT!



The life of a specialty determines whether it is classed as a perishable tool or considered as equipment. Conventional Rotary Hose has always been classed as a tool because of its short life and uncertain performance under high surging pressures.

Chiksan All Steel Rotary Hose is definitely equipment because it possesses the long life and strength inherent in steel. Consequently depreciation is very low. Upkeep is slight, as under normal cond tions two or three repackin per year is the only maintenance required. The double duty feature—good for both "pressure drilling" (it's unaffected by oil) and the usual mud circulation—makes it an investment. Ball Bearings and 17 swivel movements, together with light weight, make Chiksan All Steel Rotary Hose the modern equipment for modern conditions. No scissor Joints. Patented packing sets reduce friction and give positive sealing. Get the positive safety factor obtainable only in a Chiksan All Steel Rotary Hose.

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Chiksan
CHIKSAN OIL TOOL CO. LIMITED
FULLERTON, CALIFORNIA — GULF ENGINEERS INC., HOUSTON, TEXAS

WEST TEXAS

ANDREWS COUNTY — American Liberty Oil Co. et al's A. L. Mayhew 1, c se sw sec 23, blk A-51, PSL sur, elev 3260 ft, top anhydrite 1550 ft, salt 1635-2860 ft, dry and abnd 5000 ft. J. D. Bodkins & R. M. Barron's Kemp 1, swc sec 17, blk A-43, PSL sur, lcn. H. S. Forgeron et al's Lockhart-Brown 1, c ne¼ sec 20, blk A-41, PSL sur, lcn. Geo. F. Getty, Inc.'s R. H. Lindley-Conoco 1, c sw sw sec 8, blk A-46, PSL sur, elev 3219 ft, top anhydrite 1675 ft, shot 210 qts nitro 4612-4642 ft, pumped 156 bbls oil initial; G. E. Moxley 1, c ne ne sec 15, blk A-45, PSL sur, elev 3179 ft, top anhydrite 1980 ft, top salt 2060 ft, top Yates 2960 ft, used 5000 gals acid 4730 ft, dry, dd to 4802 ft, shot 600 qts 4652-4794 ft, co and swabs oil and water. Wm. F. Hanagan et al's Lotus Oil Co. 1, c ne¼ sec 18, blk A-48, PSL sur, dr 2150 ft. Humble O&R Co.'s J. S. Means 1-B, c nw nw sec 20, blk A-41, PSL sur, dr 2300 ft. Shell's E. F. King 1, c se se sec 10, blk A-42, PSL sur, elev 3200 ft, swabbing oil with show water, td 4471 ft. Sinclair Prairie's Emma Cowden 1, near c se se sec 12, blk 44, T-1-N, elev 3135 ft, top salt 1660 ft, top brown lime 3810 ft, lime pay 4246-4300 ft, swabbed 45 bbls oil after shot and acid, dd to 4342 ft, pb to 4300 ft, testing.

BREWSTER COUNTY—Floyd C. Dodson & Duffy's Texas American Synd. 1-A, c ne ne sec 66, blk 10, GH&SA Ry. sur, elev 4228 ft, top Deleware shale 2297 ft, sr 3915 ft. Tony Hess et al's Mrs. M. Decie 1, sec 7, blk 1, Georgetown RR. Co. sur, sd 510 ft.

BAILEY COUNTY—Ernest L. Wilson et al's Yellowhouse Land Co. 1, labor 4, league 700, State Capitol Lands, mim.

COCHRAN COUNTY—Bond Oil Corp. and L. C. Harrison's Wm. Cameron & Co. 1, c ne ne labor 1, league 55, Gregg County School lands, mim.

COKE COUNTY—Homer E. Ogden et al's E. C. Rawlings 1, sw sw sw sec 391, blk 1-A, H&TC Ry. sur, 4 mi n Bronte, mim.

CRANE COUNTY—Clark, Cooper & Smith's A. P. Jordan 1, c ne ne sec 12, blk B-22, PSL sur, elev 2810 ft, top anhydrite 972 ft, top salt 1055 ft, top Yates 2095 ft, shot 100 qts nitro 3590-3610 ft, td 3750 ft, testing. Gulf Oil Corp.'s M. B. McKnight 2, c ne¼ sec 9, blk B-21, PSL sur, elev 2687 ft, top anhydrite 416 ft, top salt 585 ft, dr 4368 ft; W. N. Waddell et al 3, swc sec 21, blk B-21, PSL sur, dr 2805 ft; W. N. Waddell et al 4, c sw ne sec 4, blk B-27, PSL sur, elev 2566 ft, dr 3920 ft. Sinclair Prairie's University 1-24, ne ne sw sec 13, blk 35, dr 1365 ft; University 1-27, se se nw sec 12, blk 35, dr 1793 ft. John I. Moore et al's T. C. Barnsley 1, c sw¼ sec 43, blk 32, PSL sur, elev 2472 ft, top anhydrite 500 ft, top salt 680 ft top brown lime 2505 ft, top sulphur water in big lime 4555 ft, base Permian lime 5715 ft, top Simpson lime 6268 ft, sdo 6509 ft. Standard Oil Co. (Texas), University 1, c nw¼ sec 5, blk 30, lcn.

CROCKETT COUNTY—Anderson Oil Co.'s Todd-Southland 1, sec sw¼ sec 27, blk WX, GC&SF Ry. sur, elev 2610 ft, top lime 1524 ft, pb fr hfw at 1644 ft to 1619 ft, used 2000 gals acid, est 10 to 15 bbls oil daily, plugged and abd. John I. Moore et al's A. C. Hoover 1, sec sec 4, blk FF, B&B Ry. sur, elev 2605 ft, pb from 2523 ft (no water) to 2245 ft, shot 60 qts nitro 2205-2245 ft, tested 4 bbls oil daily, sdo. Superior Oil Co. (Cal.) et al's J. S. Todd 1, c se ne sec 55, blk U-V, GC&SF Ry. sur, lcn for 7500 ft test, cem surface pipe.

JEFF DAVIS COUNTY—H. D. Wilcox et al's Jones-Coffield 1, nec sec 121, blk 4, H&TC Ry. sur, dr 680 ft.

DAWSON COUNTY—Ray Albaugh et al's John Robinson 1, c nw¼ sec 46, blk M, E. L. & RR Co. sur, elev 3085 ft, top salt 1970 ft, top lime 4567 ft, top first lime pay 4944-5038 ft, sd for tankage; Scanlan et al 1, sec 89, blk M, E. L. & RR Co. sur, lcn.

ECTOR COUNTY—W. A. Black & Sons-Honolulu Oil Corp.'s E. F. Cowden 1-A, c sw sw sec 25, blk 44, T-2-S, T&P Ry. sur, cem cas 3889 ft. Sinclair Prairie Oil Co.'s J. L. Johnson 2-A, swc sw¼ sec 48, blk 43, T&P Ry. sur, T-1-S, elev 2982 ft, top anhydrite 1745 ft, top salt 1998 ft, top Yates 2900 ft, top lime 3930 ft, lime pay 4130-60 ft, sul w at 4183-4347 ft, pb to 4173 ft, pumped 10 bbls oil after 360 qt nitro shot 4077-4169 ft. Weekley Oil Corp.'s E. F. Foster 2, nec nw¼ sec 13, blk 43, T-2-S, dr 1190 ft.

EL PASO COUNTY—Tri-State Oil Co.'s Chas. & L. M. Kinkel 1, nec sec 237, S. F. No. 7232, sd 2700 ft.

FISHER COUNTY—L. A. Daniel, Tr., and J. B. Rhoads' Mrs. J. R. Nickless 1-A, nec of 81-ac lse, G. W. Lawrence sur, run 7-in pipe, td 2785 ft. Forest Development Co.'s J. A. Scott 1, c se se sec 105, blk 2, H&TC Ry. sur, mim. Southern Oil Corp.'s Joe Robinson 1, near c nw¼ sec 172, blk 2, H&TC Ry. sur, dr 2400 ft.

GAINES COUNTY—Landreth Prod. Corp.'s Carroll Cobb 1, c sw sw sec 20, blk A-21, PSL sur, elev 3252 ft, top anhydrite 2200 ft, dr 3160 ft. Shell Pet. Corp.'s Amerada-Humble 1, c nw nw sec 220, blk G, Seminole area, rur.

GARZA COUNTY—S. Caprito et al's U. U. Post 1, sw¼ sec 1230, blk 5, K. Aycock sur, sd 1130 ft. Grisham-Hunter Corp.'s Post Est. 1-A, sec 6, blk 5, K. Aycock sur, sd 1160 ft.

GLASSCOCK COUNTY — Fleetborn Oil Corp. et al's Black Arrow Oil Co. 1, nec sec 13, blk 34, T&P Ry. sur, T-3-S, ur 1970 ft. John I. Moore, Loffland Bros. et al's L. S. McDowell 2, lse 2, nw se ne sec 21, blk 34, T&P Ry. sur, T-2-S, showing oil, dr 2428 ft. Shell Pet. Corp.'s L. S. McDowell 1 c se sw sec 41, blk 34, T-2-S, elev 2544 ft, top anhydrite 845 ft, salt series 905-1575 ft, jkd and abd in sul w 3282 ft.

TOM GREEN COUNTY—Spinner Oil Co.'s Reed Bros. 1, swc 137-ac lse, sub-div 39, Collyns Ranch, or Mayson & Perry sur, co 3205 ft. Ray & F. E. Webb et al's J. F. Schrievner 1, nwc 236-ac lse, A. Krending sur No. 1663, sd 664 ft.

HOCKLEY COUNTY—The Texas Co. et al's Bob Slaughter 1, labor 83, league 38, Zavala Co. S. L. sur, elev 3560 ft, top anhydrite 2240 ft, top Yates 2850 ft, top lime 4205 ft, dr 4610 ft.

HOWARD COUNTY—John I. Moore et al's TP Land Trust Co. 1, nec sec 33, blk 30, T&P Ry. sur, T-1-S, mim. Roy A. Westbrook & Dick Graham's Great West 1, nec sec 48, blk 32, T&P Ry. sur, T-1-N, elev 2469 ft, air blow-out at 1460 ft, est 373,000,000 ft daily.

HUDSPETH COUNTY—Costello Oil Corp.'s L. S. Costello 1 swc sw¼ sec 36, blk 70, T&P Ry. sur No. 1879, elev 4075 ft, lcn. Haymon Krupp Oil & Land Co.'s S. J. Thaxton 1, near sec ne se sec 34, blk 74, T&P Ry. sur, Tsp. 6, co 2760 ft.

JONES COUNTY—Fain-McGaha Oil Corp.'s Claud Lewis 1, near c nw sw sec 37, blk 15, T&P Ry. sur, co after fsh job; T. J. Lotspeich 1, nec sec 40, blk 15, T&P Ry. sur, ur 2150 ft; A. J. Swenson 1, nwc 100-ac lse, A. D. Norcop sur, dr 110 ft. Hugh King, Jr.-Cortez Oil Co.'s J. W. Harris 1, D. H. Stover sur, dr 1685 ft. N. H. Martin & Son's N. H. Hayden 1, sec 57¼-ac lse, lot 2, Div. 5, G. Martinez sur, dr 960 ft. Chas. Gyr and S. L. Davis' L. E. Clyburn 1, nec 80-ac lse, sub-div 27 H. Millard sur sd 1685 ft. T. K. Simmons et al's E. A. Hicks 1 nwc se¼ sec 5 Orphan Asylum Lands, dr 2110 ft. C. W. & W. L. Snoddy et al's H. C. Harvey 1, swc ne¼ sec 9, blk 14, T&P Ry. sur, pumped 13 bbls initial after shot, td 1635 ft. Dan E. Whatley et al's W. B. Brazelton 1, nw nw ne, sec 29, Orphan Asylum Lands, machine.

LOVING COUNTY—Mason Oil Co.'s Minnie Kyle 3, sec nw¼ sec 20, blk 55, T&P Ry. sur, Tsp. 1, rur. Porter Rankin et al's W. D. Johnson 1, nw¼ sec 12, blk 57, T&P Ry. sur, Tsp. 1, elev 2904 ft, top Deleware lime 3119 ft, top sand 3151 ft, td 3214 ft, sdo. Stanolind O&G Co.'s Minnie Kyle 1, nw nw se sec 20, blk 55, T&P Ry. sur, Tsp. 1, mim.

NOLAN COUNTY — Robinson Drlg. Co.'s Ed Gabler 1, nwc ne¼ sec 26, blk X, T&P Ry. sur, elev 2419 ft, hfw (sul) 3662-3369 ft, sdo.

PECOS COUNTY—Bahan & Rhodes' H. E. Bonebrake 1-B, w¼ sec 116, blk 8, H&GN Ry. sur, top anhydrite 1766 ft, swedging cas 2290 ft. Adams & Black's J. S. Masterson 1, sec 71, blk 10, H&GN Ry. sur, mim. Culbertson, Irwin et al's Iowa Realty Trust 1, sec 73, blk 10 H&GN Ry. sur, elev 2441 ft, shot 100 qts nitro 1684-1755 ft, dry and abnd 1829 ft. A. H. Flaherty & Son's J. C. Cunningham-Sun 1, nwc sw¼ sec 25, blk 11, H&GN Ry. sur, dr 1615 ft. Hightower O&R Corp.'s J. M. Holmes 1, sec 6, blk C-31, E. L. Ry. Co. sur, top lime 2245 ft, sul w 2415-2450 ft, dr 2470 ft. Humble O&R Co.'s Mrs. E. M. Gray 1 near c ne sw sec 94, blk 11, GH&SA Ry. sur, Deleware lime test, elev 3592 ft, dr 1325 ft; J. H. Tippett 1, sec 538, TI&M sur, dr 1080 ft. Marion Production Co.'s W. Courtney 5, nwc sec 78, blk OW, T. M. Ry. sur, sd 1420 ft. E. R. Minshall et al's J. B. Baker 1, near c sw nw sec 25, blk 148, T. & St. L. Ry. sur, co 2815 ft. W. R. Stafford, Bruce McKague & Lee Pet. Corp.'s J. L. Nutt 1, sec 1, blk 144, Wm. D. C. Henley sur, elev 2752 ft, dry and abd 2224 ft. Pinerock Oil Co. & F. J. Downeys' White-Baker 1, se se se sec 5, blk 207, T. C. Ry. sur, sp and sd. Stanley A. Thompson et al's Elsinore Cattle Co. 1, se¼ sec 53, blk D, GC&SF Ry. sur, elev 3938 ft, dr 4690 ft. Tex-Mex Pet. Corp.'s McKee 1, nwc tr 7, sec 24, blk 9, H&GN Ry. sur, elev 2384 ft, sd 2700 ft; Trans-Texas Oil Co.'s F. M. Gallagher 1 nec nw¼ sec 9, blk 51, T&P Ry. sur, Tsp. 10, sd 1260 ft; Popham Land & Cattle Co. 1, se¼ sec 235, blk 11, GH&SA Ry. sur, jkd and abd 1700 ft, skid rig. C. E. Wheeler et al's W. D. Riser 1, nec 400-ac lse, sec 24, blk 12, H&GN Ry. sur, sd 392 ft. Young Pet. Corp.'s Bailey 1, nwc ne¼ sec 23, blk 178, T. C. Ry. sur, run 7-in pipe, td 2000 ft; Perry 1, nwc ne¼ sec 28, blk 178, T. C. Ry. sur, lcn; Perry 1 (sec 3), machine.

REAGAN COUNTY—Bahan & Rhodes' TP Land Trust 1, c se¼ sec 37, blk 37, T&P Ry. sur, T-5-S, elev 2680 ft, top anhydrite 1350 ft, salt series 1420-2060 ft, top Yates 2160 ft, tested salt water 3115-3125 ft.

REEVES COUNTY—Grisham-Hunter Corp.'s Montgomery 1-A, nw sw nw sec 1, W. C. King sur, dr 2520 ft. J. C. Hill-Continental Oil Co.'s Ely 1, c nw¼ sec 38, blk 71, PSL sur, mim.

PRESIDIO COUNTY—Linderman Bros. Oil Corp.'s R. I. Bledsoe 1, swc ne¼ sec 15, blk 351, GC&SF Ry. sur, sd 3315 ft. A. H. Main et al's Greenlee 1, near c sw¼ sec 40, blk 347, GC&SF Ry. sur, lcn. Leo C. Brite et al's fee 1, ne¼ sec 113, blk 12, GH&SA Ry. sur, dr 345 ft.

SCHLEICHER COUNTY—John M. Cooper et al's Bert Page 2, c ne se sec 40, blk L, GH &S Ry. sur, mim. Homestead O&G Co. (was Mangus Oil Co.'s) Judkins-Spencer (Pure) 1, c sw ¼ sec 4, GC&SF Ry. sur, blk V-28, or Hooper-Wade sur, blk A, elev 2209 ft, top Ellenburger lime 5902 ft, pb fr sul w at 6527 ft to 5912 ft, used 2000 gals acid, then co to td and pb to 5925 ft, shot 145 qts 5814-5925 ft, co at 5908 ft.

SCURRY COUNTY—J. G. Bristow & R. H. Cantrill's S. G. Tomlinson 1, nec se¼ sec 122, blk 97, H&TC Ry. sur, dr 535 ft.

TAYLOR COUNTY—Laurel Dunn and Herman McAlister's M. Bowles 1, sec sw¼ sec 28, B.A.L. sur, elev 1773 ft, ur 1617 ft. Golden Pet. Co.'s Christian Braune 1, blk 15, league 120, Guadalupe C.S.L. sur, mim. Nix & Co.'s A. H. Spencer 1, sec 413, Angus McBeth sur, lcn.

TERRELL COUNTY—Ohio Oil Co.'s M. H. Goode 1, swc se¼ sec 26, blk 161, GC&SF Ry. sur, elev 2405 ft, tested 6,250,000 ft gas in Pennsylvanian lime 5606-12 ft in Feb. 1931, dry and abd in black shale and sand, td 9140 ft. J. T. Stockwell et al's Bates-Phelps 1, near sec nw¼ sec 5, blk A-4, G. W. Turley sur, elev 2185 ft, sd 5600 ft.

TERRY COUNTY—W. L. Pickens, T. Lomax and Maracaibo Oil Explo. Corp.'s J. B. Lewright 1, c ne ne sec 1, blk C-37, PSL sur, elev 3185 ft, top anhydrite 2120 ft, top salt 2208 ft, top Yates sand 3110 ft, show gas 3132-40 ft, top solid lime 4470 ft, testing water zone at 4950 ft.

WARD COUNTY—Magnolia's Geo. Sealy 1, (sec 55), se se ne sec 55, blk F, dr 2338 ft. C. H. Mahres et al's P. Wilson 1, sec 133, blk 34, H&TC Ry. sur, elev 2667 ft, trace gas 3628-32 ft, dr 3730 ft. L. F. White et al's Monroe-Rector 1, e cor sec 3, blk 1, W&NW Ry. sur, rur.

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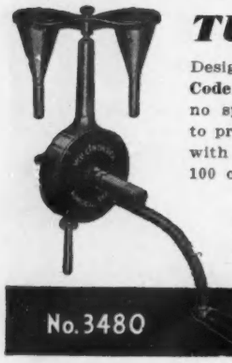

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No. 3480 W. H. CURTIN & COMPANY, INC. HOUSTON, TEXAS

WINKLER COUNTY — Harry Adams & Bradley's W. P. Edwards-Shell 5, sw nw se sec 6, blk C-23, PSL sur, cem cas 3000 ft. Dunnigan Bros. & Brahaney's Sealy Est. 1, nec nw sw sec 49, blk F, GMMB&A sur, lcn. Gulf Oil Corp.'s W. P. Edwards 1-A, se se ne sec 6, blk C-23, PSL sur, dr 2755 ft. K. D. Oil Co.'s Pink Mitchell 1, nwc s½ ne¼ sec 23, blk B-10, PSL sur, elev 2814 ft, top anhydrite 1010 ft, salt series 1070-2432 ft, top lime 2514 ft, top Yates 2600 ft, sd 3662 ft. Reed & Duffy's John Sealy 1, c ne nw sec 8, blk A, G&MMB&A sur, elev 2896 ft, top anhydrite 1010 ft, top salt 1080 ft, top Yates 2715 ft, sd 4520 ft. York & Harper, Inc.'s W. B. Munson & Gunter 1, c nw nw sec 7, blk C, G&MMB&A sur, elev 3081 ft, top anhydrite 1325 ft, top salt 1355 ft, sd 3135 ft.

YOAKUM COUNTY—E. R. Bahan, R. R. Rhodes & J. E. Fitz-Patrick's Shook 1, c ne¼ sec 420, blk D, John H. Gibson sur, lcn. Texas Pacific Coal & Oil Co.'s Mrs. Ruth Bennett 1, c ne nw sec 678, blk D, J. H. Gibson sur, elev 3559 ft, top anhydrite 2393 ft, top salt 2514 ft, top Yates 3180 ft, top brown lime 4618 ft, pb fr sul w 5300-5305 ft to 5275 ft, shot 380 qts nitro 5099-5275 ft, flowed 440 bbls oil 12 hrs, then used 5000 gallons acid, testing. Magnolia Pet. Co.'s Mrs. M. E. Taylor 1, ne ne ne sec 201, blk D, John H. Gibson sur, rur.

EAST TEXAS

ANDERSON COUNTY—Tom F. Hunter, Jack W. Frazier & American Liberty Oil Co.'s G. E. Gage 1 (160-ac), G. B. Gilbert sur, 2 mi se Blackfoot, elev 384 ft, Pecan chalk 2850-3004 ft, Austin chalk 3980-4376 ft, top Woodbine 4782 ft, top Red Beds 4989 ft, top lower sand 5000 ft, top Georgetown lime 5631 ft (estimated) dr lime 6220 ft. Roeser-Pendleton, Inc.'s V. W. Bower 3, (200-ac), E. Ritter sur, Cayuga field, Trinity test, dk. Tide Water Associated-Seaboard Oil Corp.'s Monnig Bros. 7 (3806.82-ac), Simon Sanchez sur No. 1-11, Long Lake field Trinity test, elev 233 ft, Pecan chalk 3545-3745 ft, Austin chalk 4687-4957 ft, top Woodbine sand 5273 ft, top Georgetown lime 5904 ft, dr lime 7496 ft.

BOWIE COUNTY—Ferguson & Hill's A. Y. Breckenridge 1 (412-ac), Nancy Dycus sur, 4 mi w Texarkana, top Nacatoch 740 ft, top Annona chalk 1308 ft, top Blossom sand 2063 ft, dr 2110 ft. Sutton & Hawkins' D. L. McDuffie 1 (336-ac), John Ball sur, 3 mi se New Boston, elev 333 ft, top Annona chalk 1472 ft, dr 4375 ft.

CHEROKEE COUNTY—Joe Sanders et al's J. W. Ware 1, J. Trimble sur, dk.

DALLAS COUNTY—Mauldin Oil Co.'s W. E. Howell 1 (107.7-ac), S. Laytou sur, sp and sd.

DELTA COUNTY—F. J. Estes et al's W. S. McGee 1 (207-ac), J. G. Oliver sur, 2 mi sw Klondike, elev 449 ft, top Georgetown lime 3305 ft, cored lime 3975-3981 ft and sd.

FALLS COUNTY—J. Edward Mills et al's Sam Grucholski 1 (40-ac), Dennis Herold League, 5 mi sw Kosse, elev 521 ft, top Edwards lime 3867 ft, top upper Glen Rose 4074 ft, dr 4755 ft.

GRAYSON COUNTY—Olson Drlg. Co., Jas. H. Gardner, Broswood Oil Co. et al's D. R. Utiger 1, (160-ac), P. P. Cady sur, 5 mi nw Denison, Preston Anticline, elev 722 ft, base Trinity 930 ft, top Woodford chert 955 ft, top Viola cherty-lime 1570 ft, top Stringtown shale 1854 ft, lime 2415-2575 ft, Blakely sand and dolomite 3783-3941 ft, dr 4760 ft.

HENDERSON COUNTY — Humble, Tide Water Associated & Seaboard Oil Corp.'s McElreath-Suggett 1-C (149-ac), W. P. Wyche sur, 1½ mi nw Opelika, Trinity test, elev 394 ft, dr 1950 ft. E. B. LaRue et al's Amicable Life Ins. Co. 1 (1851-ac), Phillip Jackson sur, 2½ mi w LaRue, Trinity test on LaRue salt dome, lcn.

HOPKINS COUNTY—Empire O & R Co.'s J. E. Worsham 3 (149.36-ac), A. O. Wetmore sur, elev 430 ft, top lime 3750 ft, top Paluxy series 4443 ft, pay 4483-4548 ft, flowed 6½ bbls oil per hr to deepen; Worsham 4, mim. Walter L. Goldston-Big State Oil Corp.'s H. J. Smith 4 (450-ac), J. A. Craft sur, elev 442 ft, top Georgetown 3670 ft, top Paluxy 4484 ft, pay 4513-4543 ft, completed flowed 400 bbls potential ¼ in choke; Smith 5, dr 4000 ft. D. S. Hager & W. P. Luse's J. G Reynolds 3 (200-ac), A. O. Wetmore sur, elev 418 ft, top Georgetown lime 4260 ft, top Paluxy series 4445 ft, pay 4480-4537 ft, testing; Reynolds 4, rur. Hager-Luse & Russ Pet. Co.'s Jeff M. Worsham 3, lcn; S. C. Pierce 1 (97-ac), J. A. Craft sur, cem surface pipe. F. D. Jones Drlg. Co. et al's Mrs. S B Pierce-Gulf 8 (300-ac), J. A. Craft sur, Pecan chalk 1524-1605 ft, top Red Beds 3790 ft, Paluxy pay 4434-4507 ft, testing; Pierce-Gulf 10, Pecan chalk 1520-95 ft, top Red Beds 3867 ft, top Georgetown lime 4145 ft, pay 4455-4521 ft, testing; Pierce 6 and 9, mim. Shell's J. G. Reynolds 1 (200-ac), A. O. Wetmore sur, elev 424 ft, top Paluxy series 4465 ft, pay 4517-41 ft, completed flowed 324 bbls 16 hrs; Reynolds 2, cem surface pipe.

HOUSTON COUNTY — American Liberty Oil Co. et al's J. A. Bean 1 (61.02-ac), Green Evans sur, nw Grapeland, elev 489 ft, top broken Pecan chalk 4623 ft, base chalk 4899 ft, Austin chalk 5614-5938 ft, top Woodbine 6018 ft, cored gas sand to 6042 ft, circulating to deepen. A. D. Hudspeth and Sunray Oil Co.'s A. B. Spence 1 (291.2-ac), Collin Aldrich sur, 2 mi sw Grapeland, elev 293 ft, Pecan chalk 4660-4962 ft, Austin chalk 5647-5958 ft, top Woodbine series 6030 ft, tested salt water 6040-6068 ft, dry and abnd. Hunt Oil Co.-Shell Pet. Corp.'s J. E. Elliott 1 (200-ac), J. M. Procella sur, 6 mi ne Grapeland, cem surface pipe. E. R. Mount, Branch et al's Dr. P. S. Griffiths 1 (136-ac), Frank Johnson sur, 3 mi sw Crockett, sd 1740 ft. Ridgeway and Jackson's H. F. Moore 2 (53-ac), H. Mester sur, 2 mi se Crockett, dk.

HUNT COUNTY—Penn Oil Corp., Elmer S. & Fox Wood's A. B. Parrish 1 (200-ac), Nancy Danley sur, 7 mi ne Lone Oak, dk. Superior Oil Co. (Cal.), Moncrief-Showers, Inc., Ed Hyde & W. L. Pickens' P. B. Paul 1 (160-ac), Mary Latham sur, 5 mi ne Quinlan, elev 489 ft, top Washita 3425 ft, top Georgetown 3596 ft, Fredericksburg lime 3979-4010 ft, top Goodland lime 4231 ft, top Paluxy series 4237 ft, first stringer anhydrite 5190-5217 ft, massive anhydrite 5339-5450 ft, top Red Beds 5470 ft, no shows, dry and abd in lower Glen Rose 6501 ft. The Texola Land Corp.'s J. M. Goin 1 (250-ac). Jas. Merrick sur, 2 mi sw Wolfe City, s.i and sd.

KAUFMAN COUNTY—J. M. Scott and J. B. Woodside's Wood & Temple Nash 1 (80-ac), Juan Cortez sur, 1 mi e Scurry, mim.

LAMAR COUNTY—H. Salmon, Lowe.. & Cutler's E. C. Porter 1 (30-ac), Thos. King sur, 3 mi ne Chicota, elev 421 ft, Woodbine series 168-242 ft, top Georgetown lime 354 ft, td 1467 ft, temporarily abd.

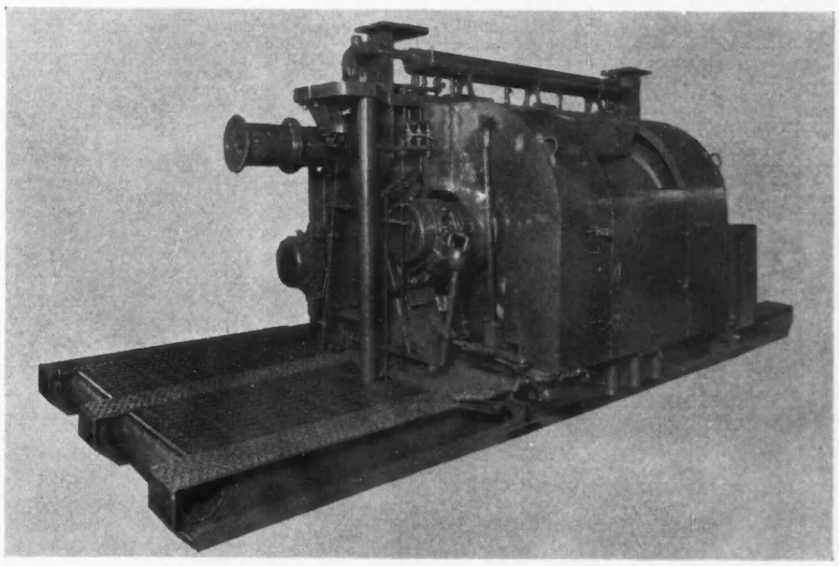
LEON COUNTY—H. M. Ogg et a.s O. Wiley 1, E. Devinney sur, 1 mi w Buffalo, dk.

LIMESTONE COUNTY—Pure Oil Co.'s W B. Kendrick 16 (96-ac), Pedro Varella sur, 3 mi w Mexia, Mexia field Trinity test, rur. A. W. Phillips, J. Johnson et al's E. M. Speight 1 (136½-ac), M. Herrin & Pedro Varella sur, 4 mi ne Groesbeck, elev 415 ft, Pecan chalk 2450-2520 ft, Austin chalk 2720-3003 ft, sd 3695 ft.

RAINS COUNTY—Humble's O. L. J. Easter 1 (39¾-ac), R. Hotchkiss sur, 4½ mi e Emory, elev 438 ft, top Woodbine 4225 ft, top Washita 4970 ft, top Georgetown 5003 ft, top Paluxy

BRONZOID

REPLACES BABBITTED BEARINGS IN EMSCO "HRB" UNITIZED DRAWWORKS



BRONZOID "76" FOR HEAVY-DUTY EQUIPMENT

BRONZOID "76" is recommended for moderately high speed and heavy load conditions, where speeds do not exceed 1,500 r.p.m., nor loads exceed 1,800 lbs. per sq. in. of projected area. Maximum ft. lbs. per minute per sq. in. of projected area: 640,000.

This grade of Bronzoid is especially recommended for such heavy-duty machinery as: Pumping Units, Rock Crushers, Drawworks, Rotaries, Crown Blocks, Locomotive Bearings, Diesel, Steam, and Gas Engines, Thrust Bearings, Thrust Collars, Pump Liners, and Clutch Pulley Bushings.

PHYSICAL CHARACTERISTICS

Yield Point	16,140
Brinell Hardness	38
Tensile Strength	26,367
Elongation in 2"	12½ %

Compression:

7,500	None
7,800	.0006
10,000	.0008
15,000	.0076

Corpus Christi Branch: Port Avenue and Buffalo St. J. S. Cook, Manager

OIL CITY BRASS WORKS

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BEAUMONT, TEXAS, U. S. A.

Houston Branch: 634 No. Edgewood St., L. H. Kennon, Manager

Specify **BRONZOID ON YOUR NEXT OVERHAUL JOB**

series 6079 ft, top first Glen Rose lime 6347 ft, top Anhydrite 6985 ft, dry and abd 8482 ft.

RED RIVER COUNTY — Carpenter Oil Corp.'s R. E. Anderson 1 (100-ac), S. W. Sims sur, 3 mi n Clarksville, elev 459 ft, top Red Beds 1250 ft, top Paluxy series 1845 ft, top Red drite 2590-2700 ft, dr 2800 ft; J. M. Roberts 1 (100-ac), John Ware sur, 10 mi ne Clarksville, electrical log shows oil saturation 1114-38 ft, td 1180 ft, sd to run pipe. Roy I. Carter Drlg. Co. et al's J. A. Tutt 1 (40-ac), Dennis Harty sur, 2 mi s Avery, elev 440 ft, sd. Dale Snecd R. H. Manning & Texfornia Co.'s Hooker-Hughes 1 (80-ac), M. E. P. & P. Ry. sur No. 642, 6 mi sw Lydia, elev 297 ft, Pecan chalk 995-1302 ft, top Austin chalk 2018 ft, sd 2720 ft.

ROBERTSON COUNTY—J. Edward Mills et al's Tony Congelosi 1-A (75-ac), Geo. A. Nixon sur, 3 mi sw Hearne, rig.

TITUS COUNTY—J. Z. Werby et al's Sam Williams-Strutton 1 (40-ac), M. E. P. & P. Ry. sur, Talco area sub-Trinity test, elev 341 ft, top Georgetown lime 3505 ft, top Paluxy series 4275 ft, sw at 4498-4510 ft, top anhydrite 5434 ft, base massive anhydrite 5676 ft, coring 5894 ft. J. V. McMahon, Geo. H. McIntyre et al's J. B. Stevens, Jr. 1 (77½-ac), J. Muechen sur, 7 mi sw Mount Pleasant, elev 349 ft, Pecan chalk 2290-2600 ft, sd 5051 ft.

VAN ZANDT COUNTY—American Liberty Oil Co.-Geo. Greer et al's J. A. Freeman 1 (92½-ac), John Walling sur, se edge Van field, elev 515 ft, Pecan chalk 1842-1946 ft, Austin chalk 2699-2949 ft, top Woodbine series 3119 ft, top broken Georgetown lime 3804 ft, top hard lime 3812 ft, top Paluxy 4610 ft, according to electrical log, dry and abd 4991 ft. Humble's L. K. Riggs 1 (26-ac), Wm. Daniel sur, ne edge Van field, rur. Stroud & E. N. Lowe's P. L. McNeill 1 (104-ac), J. W. Guest sur, 4 mi n Ben Wheeler, elev 510 ft, sp and sd.

SOUTH TEXAS

SAN ANTONIO DISTRICT

ATASCOSA COUNTY—Frontier Oil Co.'s Oppenheimer 1, Sharp sur No. 318, pb from 2770 ft to 2667 ft and bailing 3 bbls day, may acidize. Helvetia Oil Co.'s Susie Pratt 2, F. de la Garza sur, Anchorage prospect, td 3460 ft, set whipstock 2190 ft. R. J. Roberts' J. M. Elder 1, D. Brister sur, dr 1480 ft.

BANDERA COUNTY—A. T. Crane et al's R. B. Watson 1, Curver sur No. 71, fsh 2035 ft.

BEXAR COUNTY — American Gas Co.'s Oliver 1, Rodriguez sur, Gas Ridge, sd 3425 ft. W. D. Bacon et al's Seffel 1, Arocha sur, sd 1400 ft, clearing titles. J. H. Devine et al's Miholski 1-A, Bustillo sur No. 29, dr 390 ft. P. N. McCullough's A. W. Bitter 1, Baerrera sur No. 58, lowered 6 in csg to 360 ft, dr ahead. L. D. Ormsby's T. Baker 1, Baerrera sur, may abnd. J. O. Williams' Hoch Est. 1, J. M. Baerrera sur, prep to re-dr 485 ft. Woodward & Hardie's Devilbiss 1, Devilbiss sur, ru spudded to dd fr 2284 ft; Herman Sons 1, Henry Pace sur No. 37, recover most lost ds 1720 ft, clearing hole to dd.

BURLESON COUNTY—Red Bank Oil Co.'s Granm 2, E. Santef sur, spud.

CALDWELL COUNTY—G. A. McDonald's Mrs. A. C. Bridges 1, S. Seal sur, Dunlap area, bailing 2246 ft, 400 ft oih; W. F. Trammel 1, H. Hunter sur, 2 mi n Luling field, dr 2010 ft, chalk and serpentine.

DIMMITT COUNTY—Porter & Connor's Tideman 1, sec 10, S&GN Ry. sur, blk 10, to start April 15.

EDWARDS COUNTY—Dan Auld's Rigsby 1, sec 16, GC&SF sur, nw cor of county, dr water well.

FAYETTE COUNTY—McNeil Pet. Co.'s Dybala 1, Thompson League, dr 1725 ft.

FRIO COUNTY—Amerada's Halff & Oppenheimer 8, S. A. Ditch sur No. 1104, Pearsall, dr 6856 ft, lime; D. D. Harrison 1, S. Flores sur No. 306, dr 400 ft.

GONZALES COUNTY—Canoe Creek Oil Co.'s W. L. Blotz 1, W. A. Matthews sur, 2½ mi se Otting, dk. Tull et al's J. F. Bozka 1, McClure sur, dr 2010 ft.

GUADALUPE COUNTY—J. L. Collins' F. H. Wornecke 3, Gibson sur, acidized 2171 ft with 4000 gals, showed little oil, abd. Diamond Half Oil Co.'s E. Bibbs et al 1, J. W. Robinson sur, dr 1650 ft. Nick Marosis's Maierhofer 1, L. A. Peters sur, td 2175 ft, pb 780 ft, set 6 in csg 750 ft, wocs. Walter Myrrick et al's Jahns 1, J. K. Davis sur, sd 2485 ft, chalk, will deepen to Edwards. Perot Oil Co.'s J. Priestly 1, Williams sur, acidized with 3000 gals at 2093 ft, co to test. Riddle Oil Co.'s Ned Herrff 1, E. Gotari sur, dr 1695 ft. S. Robertson et al's Blumberg 1, M. Baker sur, dr 625 ft. J. B Stoddard et al's E Harris 1, Dewitt sur No. 11, sd 2141 ft. W. Scott Townsend's Tom Terrill 1, J. Cantu sur, sp. W. J. Walton et al's P. K. Delany 1, J. Cantu sur, set 46 ft 10 in csg, wocs; Martin Hoffman 1, Dewitt sur No. 11, td 2665 ft, pb to 2535 ft, swabbed 76 bbls oil day.

KERR COUNTY—S. W. Forrester's J. W. Bailey 1, Starky sur No. 408, hole caving 856 ft, wo for csg.

LEE COUNTY—J. E. Pederson's C. A. Turner 1, D. Hudson sur, td 6560 ft, sidetracked and dr 6061 ft, swabbing little oil.

MEDINA COUNTY—R. S. Bynum, Jr.'s M. V. Melton 2, J. Fricker sur No. 14½, co 927 ft. Gates-Hull-Mead's Kreisle 1, sec 908, sp and sd. R. C. Hill's Odem 2, Castro sur, sd 360 ft. E. M. Jenkins et al's Chandler 1, sec 461, abd 1127 ft. Lynd & Fondren's Lind 1, A. Smeller sur, sd 711 ft. Williams & Gulley's Noonan Ranch 1, Brunkhoff sur No. 318, hole caving 350 ft.

MILAM COUNTY—W. R. Ritchey's C. McDermott 1, J. R. Cockrill sur, dr 2520 ft, sh.

REAL COUNTY—Sun Oil Co.'s Dietert & Oppenheimer 1, sec 7, GWT&P Ry. sur, dr 5100 ft, sdy sh.

ZAVALLA COUNTY—H. F. Wilcox's T. J. Gillam 1, sec 11, GWT&T Ry. sur, dr 2035 ft.

CORPUS CHRISTI DISTRICT

ARANSAS COUNTY—Barnsdall's Kate Edwards 1-A, W. Lewis sur, Lamar prospect, dr 4225 ft. Collins & Wilkerson's McCampbell 1, blk 10, McCampbell sur, dr 5610 ft.

BEE COUNTY—Benson & Jones' G. A. Ray 1, A. Burke sur, sd 5375 ft. Dirks Bros.' Tom Strauch 1, sec 19, Chittem Ranch, dr 3460 ft. J. R. Dougherty's L. E. Weiss 1, J. M. Uranga gr, coring 4420 ft, Pettus 4308-41 ft, show sw. W. C. McBride, Inc.'s Brown and Hanson 1, J. W. Copeland sur, dr 3250 ft. H. H Weinert et al's James Smith 1, J R Johnson sur, set sur csg, dr ahead.

BROOKS COUNTY — Standard of Texas' Mestina (Lease 2) 1, tr 11, R. G. Salinas sur, 6 mi n Alta Mesa pool, mir. Texas Gulf Prod. Co.'s T. S. Proctor 1, blk 2, sec 20, Los Olmos & Blanco sur, dr 2010 ft.

CAMERON COUNTY—Stapper Pet. Corp.'s Port Isabel 1, blk 17, Port Isabel sub, Espiritu Santo gr, dr 3950 ft.

De WITT COUNTY—George B. White et al's W. L. C. Poetter 4, W C Brown sur, coring 3584 ft

GOLIAD COUNTY—R. B. Swiger's Carrie Wood 1, blk 23, Swiger sub, Villa sur, dr 5340 ft.

HIDALGO COUNTY—Gulf States Oil Co.'s J. Engelman 3, lot 3, blk 70, Mestinas gr, set 8100 ft 5 in csg, wocs. Henshaw Bros.' Flores 1, tr 250, por 39, N. Samfordyce field, td 4136 ft, pb 3100 ft, set csg, wocs. Sterling O&R Co.'s J. C. Engelman 1, lot 5, blk 95, Mestinas gr, coring 6665 ft.

JACKSON COUNTY—Shell's T. N. Mauritz 1-B, O. S. York sur, ab 306, set 200 ft 10 in csg, dr ahead. Steinberger Pet. Corp. & Chicago Gulf Corp.'s Lon Rogers 1, Rodriguez sur, td 5040 ft, testing thru perf 4770-80 ft. The Texas Co.'s T. N. Mauritz 1, Morris & Cummings, ab 305, ru.

JIM WELLS COUNTY—Arkansas F. O. Co.'s G. H. Bierstadt 1, blk 32, J. Reynolds sur, dr 4113 ft. Baltic Dr. Co.'s B. W. Owens 1-A, Poitevent sur, dr 4300 ft. Tom Graham's J. Luby Est. 2, sh 4, Los Presnos de Abajo gr, td 5792 ft, pb and set csg 4030 ft, sand, wocs. Stanolind O&G Co.'s J. W. Bird 1, Los Presnos de Abajo gr, set csg 5835 ft, wocs. Tsesmelis & Reese's Martha Earhart 1, J. Suggs sur, ab 447, sp.

KARNES COUNTY—Victoria Dr. Co.'s John Yanta 1, S. G. Hardaway sur, sd 1575 ft.

LAVACA COUNTY—Willshite Union Oil Co.'s A. Pohl 1, M. Wooten sur, sd 3135 ft.

LIVE OAK COUNTY — R. H. Feltner's Sanger Ranch 2, GC&SF Ry. sur No. 385, clearing lcn. Henderson Coquat & Conservative Oil Co.'s L. A. Reagan 1, S. McGloin sur, dr 3200 ft. Marzo Oil Co.'s Mrs. Bessie Chestnut 1, L. Ayers sur, dr 625 ft.

NUECES COUNTY—Allen & Seaboard Oil Corp.'s J. O. Chapman 2, sec 38, Laureless Gardens tr, 6717 ft, set 7 in csg 6588 ft, perf 6464-71 ft, flowed oil and wash water ¼ ch, but sw broke in, recementing. Mills Bennett's J. O. Lamb 1, J. V. L. de Herera sur, sd 6520 ft to dr water well. Camp Prod. Co.'s C. P. Wardner, Tr., 1, sec 12, Stratton sub, dr 3880 ft. E. M. Jones' Lucy Cooke 1, Quadrilla Irr. sur No. 139, redr 1360 ft. Sloan-Harvey and Green River Oil Co.'s E. Cassens 1, sec 26, Agua Dulce Farm Lots, dr water well. Southern Minerals Corp.'s Richard King 1, sec 32, King Farm Lots, coring 3060 ft. Texon Royalty Co.'s Sevier 2-B, Chapman Lands, washing over ds 5384 ft, pipe stuck 5864 ft. United Prod. Co.'s W. H. Harvey 1, Garcia sur, coring 6550 ft. Wellington & Pan American Sevier 1-A, td 6075 ft, testing thru perf 5348-56 ft.

REFUGIO COUNTY—Paul Meaders' Temple Lumber Co. 1, G. W. Maine sur, abnd 6760 ft. United Prod. Co.'s J. J. O'Brien 12, Refugio Town tracts, coring 6790 ft. Wynne Dr.

PROGRESS

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M & M BUILDING HOUSTON, TEXAS

Co.'s Mrs. C. D. Roache 1, Downey sur, dr 5565 ft.

SAN PATRICIO COUNTY — Eleanor Oil Co.'s J. F. Green Est. 1, T. T. Williamson sur, dr 5645 ft. Phillips Pet. Co.'s H. Schmidt 1, sec 81, Paul sub, dr 4156 ft.

VICTORIA COUNTY—George H. Fchols' W. H. Bennett 3, J. E. Galban sur, n ot Heyser field, ru. Magnolia's Wagner 1, T&NO Ry sur No. 1, dr 3200 ft. Shell's Houston Bank 1, SA&MG sur No. 7, sand series 4638-4765 ft, set casing 4756 ft, wocs. Union Oil Co. of Cal.'s C. A. Keeran 3, M. de Leon sur, dr 1135 ft.

WILLACY COUNTY—Ruez-Morton, Inc.'s F. Armendiez 1, sh 4, San Juan de Carricitos gr, dk; Johnson-Stillman 1, blk 23, sh 44, San Juan de Carricitos gr, sd 650 ft. Shell et al's Yturria 1, San Juan de Carritos gr, sh 64, La Sal Viejo, dr 7836 ft, sh.

LAREDO DISTRICT

DUVAL COUNTY—Argo Oil Co. and John Clopton's Smith-Corkill 2, sec 498, pumped 30 bbls 27.1 gravity oil, 100 bbls sw 23 hours sand 2670-88 ft, csg set 2780 ft and perf 2672-75 ft. Atlantic Ref. Co.'s W. A. Lowe 1, sec 466, lcn. Clark & Cowden's J. M. Richardson 3, sec 5, lcn. Tom Graham's A. G. Villareal 1, San Andres gr, lcn. Frank Gravis' F. Vaello Puig 1, San Andres gr, dr 700 ft. C. K. Gravis, Jr.'s C. Holzapfel 1, J. Poitevent sur No. 42, dr 1000 ft. Humble's C. D. Sevier 1, sec 329, coring 3950 ft. Rio Bravo Dr. Co. and Geo. Coates' W. R. Peters 2-C, sec 398, coring 2675 ft. W. H. Wollett and M. D. Mastena's Bishop Cattle Co. 1, sec 74, lcn.

JIM HOGG COUNTY—J. V. Adams et al's W. P. Allen 1, sec 84, BS&F sur, prep to sp. Cole Pet. Co.'s Yeager Ranch 1, sec 452, dr water well. French Oil Co.'s P. V. de Garza 2, sec 269, cored sand 1033-35 ft, set 7-in csg 1033 ft, wocs. Gifford Oil Co. and Locke Purnell's E. L. Armstrong 1, sec 43, dr 4130 ft.

McMULLEN COUNTY—Howell Oil Co.'s J. H. Martin Hrs. 1, near Nueces r, set 60 ft 10-in csg, wocs. Humble's R. B. Swiger 1, sec 46, prep to mim. Edward M. Jones' Harry Ezzell 1, sec 3, Ezzell Ranch sub, td 1255 ft, perf approx 1185-90, flowing gas and sw ½ ch, tp 300, cp 400. Loma Oil Co.'s L. Jacob 3-B, sec 15, sand 1067-74 ft, pumping 50 bpd, opens new pool.

STARR COUNTY—John H. Clopton et al's Green 1, blk 5, sh 85, por 81, ran electric formation tester 3044 ft, wait on orders; D. Tijerina 4, blk 12, sh 14-C, por 80, dr 700 ft. G. E. Dodd's Wood Est. 1, por 84, dr 1710 ft. McLeon et al's C. Ramos 1, sec 150, dr 250 ft. K. E. Metten's Starr County Cattle Co. 1, blk 34, por 89, set sur csg 398, wocs. Moss & Heard's S. B. Ricaby 3, por 83, coring 1250 ft. F. P. Schwab and Fred Foster's Munoz 1, Javali gr, lcn. R. Wheeles' S. Welsh 1, blk 1, Bateman sub, Pedernal gr, sp.

WEBB COUNTY—J. M. Anderson's Juarez 1, blk 12, sec 1111, dr 1381 ft. Bolling & Coffey's A. Villareal 1, blk 17, sec 767, clearing lcn. French Oil Corp.'s J. M. Garza Est. 2, sec 1121, lcn. Kepley Prod. Co.'s W. C. Billings 1, sec 6, lcn. O. W. Killam's Fee 1, sec 1690, dr 4450 ft. Lutex Oil Co.'s Lone Star Con. Co. et al 1-a, por 12, sd 1650 ft. Joe Palmer et al's Laredo Nat'l Bank, sec 463, dr 1350 ft. Wilcox O&G Corp.'s B. S. Dunbar 1, Joaquin Galan gr, dr 4180 ft.

ZAPATA COUNTY—Mills Bennett's F. B. Martinez 1, sh 1, blk 84, El Grullo gr, sp. Fidelity O&R Co.'s Gopher 1, blk 9, sec 6, sh 8, Borrego gr, lcn. H. G. Lewis' S. Benavides 1, blk 39, Fansler & O'Hern partition, Villa gr, set sur csg, woc. Magnolia Pet. Co.'s R. Cuellar 4, sec 245, fsh 1193 ft.

TEXAS GULF COAST

BRAZORIA COUNTY — Pure's Slade 1, Peach Point prospect, S. F. Austin sur, dr shale 3698 ft.

BRAZOS COUNTY—Crosby Dr. Co.'s Lewis Orlando 1, T. H. Mays sur, dr shale 3709 ft.

CHAMBERS COUNTY—Kirby Pet. Co.'s Harden 1, w of Cotton Lake, M. L. Short sur, coring 6509 ft. Sun's White Estate B-1, Wm. Mays sur, dr sandy shale 8949 ft.

HARRIS COUNTY—B. A. Ferrell & J. B. Cox et al's Bender Estate 1, w of Humble field, M. W. Travis sur, sd 1182 ft. Stanolind's Oates 1, Clinton area, C. Martinez sur, woc 8006 ft; same operator's Warren Minerals 1, Hockley dome, H&TB sur No. 1, dr shale 6549 ft. Texas Gulf Prod. Co.'s Gillispie & Garnsey 1, Aldine area, S. Contreras sur, making a drill stem test 6971 ft.

JEFFERSON COUNTY—Humble's Jefferson Land Co. 1, Cheek area, C. Hillibrandt sur, fsh 8458 ft.

LIBERTY COUNTY—Diadem Oil Corp.'s Pickett 1, Devers area, H&TB sur No. 10, cutting and pulling 6846 ft.

MATAGORDA COUNTY — Continental's Robbins 2, Citrus Grove area, C. Franz sur, setting 8⅝ in csg. Hammond Exploration Co.'s Croker 1, South Bay City field, E. Hall sur, testing 8194 ft. Glenn H. McCarthy's Foley 1, Palacios prospect, L. Goodwin sur, circulating 8500 ft. Sun's Craig 2, Hawkinsville, J. Williams sur, testing 3724 ft. United North & South Dev. Co.'s Stoddard 1, sw of Buckeye field, J. B. Cotton sur, dr sandy shale 8235 ft.

POLK COUNTY—Mayo et al's Mayes 1, w of Segno, J. G. Loving sur, sd 1000 ft.

WALLER COUNTY — Sumas Prod. Co.'s Menke 1, se of Hempstead, C. Donohue sur, dr shale 4865 ft. H. E. Williams' G. C. Giddings 1, near Hempstead, J. Mouser sur, dr shale 2986 ft.

WHARTON COUNTY—Sam G. Harrison's Byerly 1, El Campo prospect, E. T. R. R. sur No. 27, abn 6524 ft. Plummer et al's L. Logue 1, Spanish Camp prospect, S. F. Austin sur, No. 3, coring 8199 ft. Texas Co.'s Weatherer 1, e of Louise, Ogden sur, dr shale 4780 ft.

EAST TEXAS BORDER COUNTIES

CASS COUNTY—G. H. Chamblee's Collett Hrs. 1, J. S. Smith sur, lcn. McAlester Fuel Co.'s J. J. Dooley 1, Calloway Davis sur, lcn.

HARRISON COUNTY—Potsam Oil Co.'s Zion Douglas 2, S. Fields sur, dr 2100 ft. H. H. Alvord's Flannagan 1, L. Womack sur, spd dr 1512 ft. Kennedy & Batchelor's Lane & Greer 1, J. M. Baker sur, claim so, arr dr plug in 5¾ in csg, td 2336 ft (Tokio).

MARION COUNTY—Ark. La. Gas Co.'s W. S. Ford 1, Chas. Grason sur, elev 332 ft, top massive anhydrite 5588 ft, top Hill 5971 ft, top Gloyd 6085 ft, perf 7-in csg set at 6351 ft at 6107-12 ft, swabbed and flowed 34.2 gravity oil, treated with acid, swabbing, td 6351 ft; George 1, W. R. Mayers sur, rur. Laura McIntosh 1, Wm. R. Edmonson sur, dr 4966 ft, elev 272 ft, top Nacatosh 1870 ft. Dunn & Fisher's Chatten 1, A. de los Santos Coy sur, elev 247 ft, top red beds 3645 ft, dr 4392 ft. Holcomb, Thomasson et al's Lizzie Henderson 1, R. Bennington sur, swabbed 140 bbls oil in 24 hours after perf at 5980-93 ft, installing siphon, old td 6408 ft. Mrs. J. E. Hale et al's Lizzie Henderson 1, R. Bennington sur, lot 11 (5-ac), lcn. Seymore Oil Co.'s Lucas 1, A. Castleberry sur, dk. A. T. Freet et al's G. C. Bonham 1, Robt. Potter sur, dk.

PANOLA COUNTY—Magnolia Pet. Co.'s E. A. Hull 2, Thos. Applewhite sur (3400 ft se Hull 1), mim. Motex Oil Co.'s J. M. Furrh 1, Thos. Alstone sur, tested so and mud, show sw in 20 minutes 5049 ft, dr 5225 ft. Logansport P. L. Co.'s Rushing 1, Mannan Smith sur, dr 2900 ft. Danciger O&R Co.'s J. W. Tatum 1, Alfred Bissell sur, mir. R. H. Dearing et al's Wooten Est. 1, Winny Mann sur, dk.

SHELBY COUNTY—H. A. Stebbinger et al's Pickering Lbr. Co. 2, A. Hanson sur, gas killed, cemtd 9⅝ in csg 1500 ft, trying to get to bottom to core, td 4920 ft, hd crystallized lime.

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KANSAS Completions

Week Ending March 6, 1937

Company, Well and Location	Init. Prod. Bbls.	Depth
BARTON COUNTY—		
I.T.I.O. Co., Hogan 1, nw nw sw 34-16s-13w	1386	3371
Skelly, Bloomer 8, ne se ne 36-17s-11w	2540	3251
CHAUTAUQUA COUNTY —		
Sagamore Oil, White 9-B, csw nw.	¶1/3	1146
ELLIS COUNTY—		
Gulf Oil, Walters 1, sw nw se 2-12s-18w	156	3619
GREENWOOD COUNTY—		
Polhamus Oil, Gechter 2, se sw sw sw 36-25s-10e	60	1984
McPHERSON COUNTY—		
Ohio Oil, Decker 5, ne ne ne 20-21s-1w (pb 2590)	¶20½	3340
Decker 10, se ne se 20-21s-1w	1524	3302
RICE COUNTY—		
Empire, Weiland 2, sw sw sw se 32-19s-9w	408	3233
Gulf Oil, Stolz 9, nw sw nw 32-19s-10w	997	3286
Knop 3, nw nw nw 33-19s-10w	1281	3286
Stolz, Jr. 9, nw ne nw 5-20s-10w	1657	3307
Tatlock, Berscheidt 3, se sw sw 6-20s-10w	889	3290
Berscheidt 5-A, sw se sw 6-20s-10w	1449	3305
RUSH COUNTY—		
Carter Oil, Schroeder 1, nw sw se 23-18s-16w	394	3535
RUSSELL COUNTY—		
Bridgeport, Mermis 9, ne se sw 33-13s-15w	241	3324
Hartman & Blair, Sullivan 4, sw ne se 2-14s-15w	lcn.	abd.
Transwestern Oil, Polcyn 3, ne ne se 10-14s-15w	1559	3247
Polcyn 1-C, nw nw sw 11-14s-15w	1267	3258
National Ref., West Reinhardt 1-A, ne ne nw 36-14s-15w	2489	3196
Carter Oil, Deitrech 1, sw sw sw 8-15s-13w	389	2888
Phillips, Hoffman 3, ne nw se 31-15s-13w	2774	3323
W. I. Southern, Neidens 2, se nw ne 32-15s-13w	2149	3339
Getty, Baxter 1, se se ne 8-15s-15w	lcn.	abd.
SEDGWICK COUNTY—		
Western Kansas O&R, Keagy 1, nw se sw 15-25s-1e	427	3379
Shell, Fischer 2, se ne se 15-26s-2e.	102	3354
SUMNER COUNTY—		
Rosespring, Rutter 1, cnw nw 21-33e-2e	125	3233
WOODSON COUNTY—		
Elbar Oil, State Bank 6, cwl ne ne 27-23s-14e	120	1650

*Failures; †Junked; ¶Million cu. ft. gas.

OKLAHOMA Completions

Week Ending March 6, 1937

Company, Well and Location	Init. Prod. Bbls.	Depth
CREEK COUNTY—		
Beverley Dev., Carman 1-A, sw se ne 25-17n-8e (otd 1463)	6	1502
Giblin et al, Vance 3, swc 6-18n-7e, pb 2560	40	2560
Elliott Bros., Crothers 3, csl ne se 18-19n-93, pb 2455	2	2420
CLEVELAND COUNTY —		
Helmerich & Payne, Blenn 1, c nw ne 6-8n-1w	*	7584
COTTON COUNTY—		
Phillips, Morse 1, swc ne 6-5s-12w.	*	2183
GARVIN COUNTY—		
Huckleberry et al, Wood 1, se ne sw 5-4n-3e	*	3837
Skelly, Gross 1, se ne sw	10	2410
HUGHES COUNTY—		
Parbett, Dunn 1, se nw se 11-7n-8e.	15	1845
Davis & Diamond, Diamond 1, c ne sw 5-8-10e	¶12	3177
JACKSON COUNTY—		
Burk Royalty, Minor 5-A, sw ne ne 15-1n-20w	75	1324
KAY COUNTY—		
Clark Nye, Orr 1, swc ne 5-28n-1w.	250	2793
KIOWA COUNTY—		
R. C. Roberts. Funkhouser 1, se nw nw 25-7n-17w	*	811
MUSKOGEE COUNTY—		
Robinson Oil, Kee 6, nwc sw 17-13n-16e	35	2105
Mussellem, Jennings 1, nwc sw 4-13n-19e	5	1378
Zow Oil, Annicker 1-A, nec 14-14n-16e	10	1526
J. Summers, Jefferson 1-A, nw ne ne 6-15n-15e	*	1350
NOBLE COUNTY—		
Tide Water, Hackett 1, ne nw se 21-23n-2w	4050	4333
OKFUSKEE COUNTY—		
Manahan, Dalton 16, nec sw 36-10n-8e	245	1752
Blackwell et al, Lehmer 1, nwc 17-10n-9e	55	1915
Chapman, Yarbrough 3, ne se ne 18-10n-9e	65	1913
Chapman, Yarbrough 7, nw nw ne 18-10n-9e	170	1882
Deaner, Shultz 2, nw se nw 18-10n-9e	125	1897
Rodgers, Yarbrough 3, nw ne ne 18-10n-9e	65	1910
Oklahoma Oil, Ott 1, sw nw nw 19-10n-9e	100	1895
Chapman, F. Williams 7, ne sw nw 30-10-9e	285	1753
Mid-Continent, McHernan 1, nw ne se 24-12n-8e	¶1	4015
OKLAHOMA COUNTY—		
Knox Garvin, Brewer 1, ne ne sw se 27-12-3w	1718	6492
Wegener et al, University 1, nw se se 27-12n-3w	1147	6475
OKMULGEE COUNTY—		
Misener, Francis 12, se se sw nw 11-15n-14e	¶½	1488
OSAGE COUNTY—		
Johnson Oil, 19, sw sw nw se 30-21n-9e	*	323
20, csl nw se 30-21n-9e	*	339
Okla. Nat. Gas, 4, ne sw sw sw 4-21n-11e	*	1905
Midco, 5, cwl sw sw 17-22n-10e	135	2067
Gulf, Bearcat 1, nwc 20-22n-10e	580	1945
Continental, 3, ce½ w½ se 5-23n-9e, pb 2418	10	2150
Phillips, 3, ne se ne 27-26n-6e	145	2925
I.T.I.O., 47, se sw nw ne 35-29n-11e	*	920
PAWNEE COUNTY—		
C. A. Gains, Balton 1, nw se se 23-20n-9e	*	2160
PONTOTOC COUNTY—		
Continental, Helms 2, sw sw se 2-1n-7e	875	4363
Fleethorn, Merrin 5-A, ne se se 20-2n-7e	3140	3926
Sinclair Prairie, Moddy 2, sw se ne 22-2n-7e	3558	3727
Skelly, Ingram 2, ne nw sw 23-2n-7e.	4480	3912
Fleethorn, Wosley 1-A, nwc se 28-2n-7e	1920	2360
Marshall et al, Malloy 1, se nw sw 30-5n-4e	*	1980
POTTAWATOMIE COUNTY—		
Grough et al, Swan 1, nw sw nw 29-6n-5e	10	2483
SEMINOLE COUNTY—		
Wrightsman, May 3, ne sw sw 25-10n-7e	1547	3529
Amerada et al, Pryor 2, sw ne nw 36-10n-7e	1320	3643
Pioneer, Jarvis 1, sw ne se 35-11n-5e	*	4710
STEPHENS COUNTY—		
Xeane & Rankin, Mayers 2, se sw se sw 14-1n-9w	*	2204
Razier Bros., Price 1-B, se nw sw 10-3s-5w	5	1471

*Failures; †Junked; ¶Million cu. ft. gas.

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AUDITS — SYSTEMS
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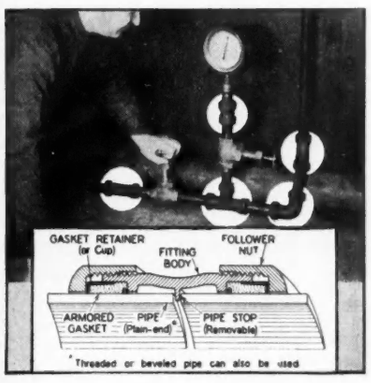
NEW PRODUCTS FOR THE FIELD
Machinery • Tools • Catalogs • Books

PIPE FITTINGS
S. R. Dresser Manufacturing Company

S. R. Dresser Manufacturing Company, Bradford, Pennsylvania, has announced a new line of special pipe fittings, which the manufacturer claims eliminates the need for cutting pipe to exact lengths, threading, grooving, flaring, or screwing up joints in cramped quarters. Nothing but an ordinary wrench is needed to complete a joint in a few moments, the manufacturer states.



S. R. Dresser Fitting

After inserting the plain-end pipe into the fitting (which comes completely assembled), it is only necessary to tighten two threaded octagonal follower nuts with a few quick turns of the wrench. As this is done, resilient "armored" gaskets at each end of the fitting are compressed tightly around the pipe, forming a positive seal. The resulting joint, company engineers point out, is not only permanently tight but absorbs normal vibration, expansion and contraction movement, and permits deflections of the pipe in the joint. If the pipe is already threaded, it can also be joined in the same way.

The complete line of Style 65 Fittings includes standard and extra-long couplings, ells (both 45° and 90°), and tees, all supplied in standard steel pipe sizes from ½-inch I.D. to 2-inch I. D., inclusive, black or galvanized. These fittings are recommended by the manufacturer for simplifying joint-making and repair work on both inside and outside piping, for oil, gas, water, air, or other industrial lines. The basic principle is essentially the same as that used in other styles of Dresser coupling.

PUMPING UNITS
Fairbanks, Morse and Company

Fairbanks, Morse and Company, Chicago, has announced a new line of pumping units for oil field service consisting of an "F-M" simplex or duplex self-oiling power pump mounted on a steel base with either an F-M multi-cylinder power unit, F-M Model 36 Diesel, or F-M "Z" engine. Six-inch stroke pumps, with interchangeable cylinders ranging in size from 2½-inch to 4-inch, are driven through "Flex-Mor" V-belts by F-M 6-cylinder gas, gasoline, or combination gas and gasoline power units. These pumping units have capacities of 33 to 133 barrels per hour with pressures from 270 to 500 pounds.

Four-inch stroke simplex and four- to 10-inch stroke duplex pumps are available with gas or gasoline multi-cylinder power units, 4-cycle Diesels or "Z" gasoline, kerosene or natural gas engines, offering a wide range of pump sizes with various prime movers.

Bases, fabricated from steel "I" beams and plates, facilitate moving.

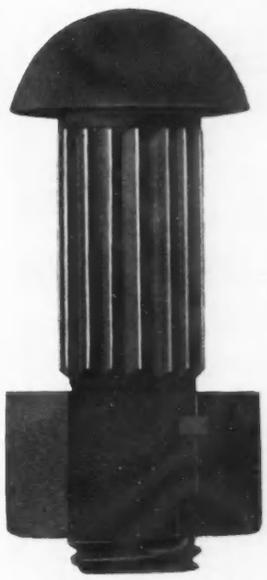
RIB BOLT
Automatic Nut Company

Automatic Nut Company, Lebanon, Pennsylvania, has announced the "structural rib bolt," which the manufacturer claims is a practical substitute for riveting. The triangular shaped ribs imbed themselves in the wall of the hole in the work. The diameter of the rig section is 3/32 inch greater than the nominal diameter of the structural steel bolt and 1/32 inch larger than the size of the hole size in the work.

The manufacturer states that the ribs will not project beyond the thickness of the plates if proper specifications are given when ordering. Spacing is the same as for rivets. The rib bolt is driven through the hole with hand hammer or sledge and the nut is drawn tight with structural wrench.

The head is the standard American Boiler Makers Association button head. The rib is triangular shaped. The bolts are of carbon manganese steel with a minimum tensile strength of 70,000 pounds per square inch. Galvanizing does not affect the locking of the special nut.

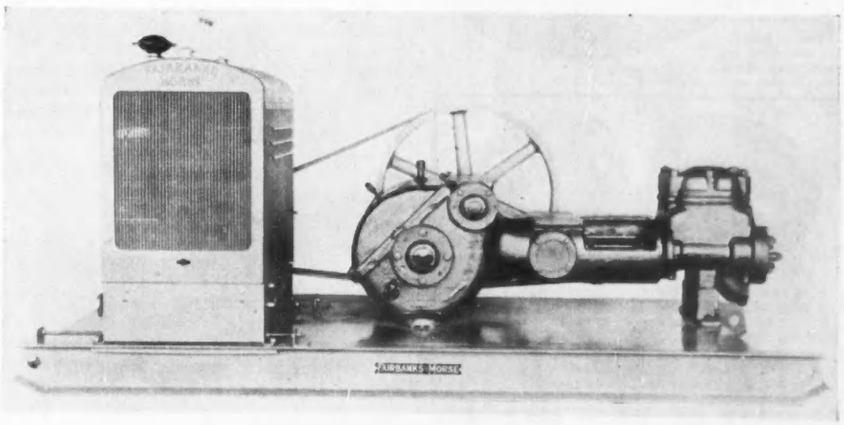
The nut and lock are a single unit, and no pins, washers or separate parts are required. The end of the locking pin travels between the threads of the bolts. In doing this the pin assumes a fixed angle and establishes a point of impingement against the bolt, the pin biting into the body of the bolt and thus maintaining an anchorage against vibration and shock. This impingement really acts as a ratchet, moving up and taking a new bite as the nut is drawn tighter, yet resisting and preventing the nut from turning in the wrong direction. Once locked the nut remains in place until unlocked with a wrench.



Structural Rib Bolt

TANK CLEANER
J. F. Jacobs

J. F. Jacobs, Baird, Texas, has announced an automatic tank cleaner, which was designed especially for use in districts where bad oil and salt water make it necessary to clean tanks and separate water and other residue from oil produced. This



Fairbanks, Morse Pumping Unit

A Single Set of

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VALVE CUPS . . .

used 6 days a week for 541 weeks!

What do you think of valve cups that are in good condition after having travelled 1,800 feet per hour for 11,371 hours at Tulsa, Oklahoma? If **you** think what we think . . . you probably think that ORIGINAL COMPOSITION VALVE CUPS should be in **your** well. **Put them there** . . . and save the costs of frequent re-cupping.

DARCOVA
(Orange Label) the standard for more than thirty years under severe service at all depths.

DARVAL
(Blue Label) for super-service in wells to approximately 2,000 feet in depth.

DARFLEX
(Green Label) the popular favorite for wells to 800 feet in depth.

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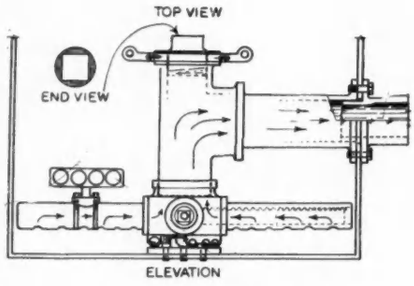
machine heats the oil and treats the oil, then cleans the tank.

Its working principle represents four arms in the bottom of the tank, screwed into a four-way connection, or nigger head, with a connection in the top, vertically, permitting a discharge line to be connected on there with the use of a nipple and a tee. This enables the discharge line to be screwed into the horizontal connection of the tee, and run directly out through the side wall of the tank. The four-way connection which the arms are screwed into sets on a plate in the bottom of the tank, allowing it to turn, which plate is held in place by a spider, or four straps of iron. The spider extends to the walls of the tank and is bolted to the plate in the center and to



Jacobs Tank Cleaner

the side walls of the tank at each outer end. The arrangement holds the plate in permanent place, the four-way connection resting on this seat and allowing the four-way connection, or nigger head that the arms are screwed into to turn at will.

The discharge line coming in at the top is not connected by threads, but by a short sleeve, which the tee slips over and does not screw into. This enables the cross arms to be free to turn without interference to the bottom plate or the discharge arm. A ratchet with a ratchet bar, extends from one arm to the other, one fourth distance around the tank. The ratchet bar fits snugly with a ratchet wheel, keyed onto a short shaft extending through the side wall of the tank, in which is a stuffing box on the outside. Regular stuffing box rings are used to prevent leakage, the short shaft coming out through this stuffing box permitting a wrench with a square shoulder to be placed on the outside. Turning the shaft turns the sprocket on the inside of the tank, which fits snugly in the sprocket bar, enabling the operator to revolve the arms in the bottom of the tank a quarter distance around the tank, which when repeated both ways, will allow the arms to sweep the entire bottom of the tank. This forces the salt water and residue accumulated in the bottom of the tank through the holes or perforations in the arms, which pressure is ample when the tank is full to force any sediment or residue or B.S. out the discharge line to the outside of the tank.

A ladder bracket is clamped to the top of the tee, which connects to the discharge line. This ladder bracket permits the bolting of a ladder to it in the center of the tank. Otherwise in large tanks, where gin poles are used for a roof support, this tee will probably be a diameter of 6 inches, permitting the end of the gin pole to slip down in the top connection of the tee, which will have a shoulder for support to the roof.

In removing salt water or sediment from the bottom of the tank, while it is full of fluid, the oil is not disturbed. This device is a permanent fixture in the tank and is below the pipe line connection level. It does not affect the capacity of the tank. The machine is made in various sizes and will perform its work in any size tank up to 85,000 barrels.

This machine is now being manufactured by Hooks, Henson and Company, sole distributors for Northeast Texas, located at Henderson, they having acquired the exclusive right in this territory. There will be distributors in each and every territory where oil is now produced in the very near future, making it possible to secure this machine all over the world. This machine can be installed in tanks all ready set, at the same price that they can be purchased and installed in new tanks.

GASKET CUTTER

The Allpax Company

The Allpax Company, Marmaroneck, New York, is marketing a gasket cutter designed for use with asbestos sheet, rubber, duck, canvas, cork felt or cardboard. The cutter will cut gaskets from one inch to 36 inches in diameter.

CARE OF SUCKER RODS

S. M. Jones Company

A 24-page booklet, "Care and Handling of Sucker Rods," has been made available to the industry by S. M. Jones Company, Tulsa and Toledo. Information contained within the book is the result of a careful and thorough examination of rod handling with the view of improving performance. The Feld Engineering Department of the firm was directly responsible for the compilation of the data, which is illustrated with photographs showing particular phases of sucker rod handling and application.

A number of months were required for the gathering and selection of the material included within the book. Many sources were contacted, both for information as to the contents and to determine what size would be most desired by engineers. The result is a condensed fund of pertinent information, subdivided into Unloading and Warehousing, and Running and Servicing Rods. Under the latter heading the following points are considered individually: Loading and Hauling Rods to the Well, Rod Crew Equipment, Running New Rods, Pulling and Servicing Rods, Laying Down Rods and Sucker Rod Reports and Records. The book is a convenient, pocket-size form.

Engineers contacted prior to the release of the booklet have already placed requests for copies ranging from a half dozen to 40 or 50. Interest among company engineers has been keen toward improvements in various practices, and this booklet meets the demand for a condensed and simplified book of procedure related to sucker rods.

The publishing firm believes that many important points that might be used in future issues could readily originate in the field, and for this purpose have enclosed an addressed card with space for suggestions. Copies of the booklet are available from S. M. Jones Company, 518 McBirney Bldg., Tulsa, Okla.

This Week with the Industry's EQUIPMENT SUPPLIERS

Frank Brown Foreign Sales Representative of Baash-Ross

Appointment of I. Frank Brown as foreign sales representative of Baash-Ross Tool Company of Los Angeles and Houston, is announced by H. C. Ross, vice president and general sales

I. FRANK BROWN

manager of the company. Brown maintains offices at 30 Rockefeller Plaza, New York City, and has acted in the capacity of sales representative in foreign oil fields for many years.

Brown Assistant Pipe Sales Manager for Republic Steel

Manly B. Brown has been appointed assistant manager of sales of the pipe division of Republic Steel Corporation and will devote his efforts to oil country tubular sales, according to N. J. Clarke, vice president in charge of sales. Brown formerly was Eastern representative of Wilson & Bennett Manufacturing Company, and prior to his connection with that concern was Chicago representative of the Ohio Corrugating Company and for eight years was district sales manager in Chicago for the Wheeling Steel Corporation. He spent two years in France during the war. Brown will make his headquarters in the Republic Building in Cleveland.

Caterpillar Appoints Galvin Sales Chief

Appointment of E. R. Galvin as general sales manager of the Caterpillar Company has been announced. Galvin left his position as general sales manager of Cleveland Tractor Company in 1928 to become a district representative for "Caterpillar." Shortly thereafter he became sales manager in charge of the Eastern sales division, with headquarters at Peoria. In January, 1936, he was appointed assistant general sales manager, from which position the new appointment is a further step of advancement.

Prior to his connection with the tractor industry, "Ed" Galvin was for many years a member of the Du Pont organization, reaching with that company the position of manager of the Sporting Powder Division. Making his work also his hobby, he long held a place close to the top among trapshooters of the United States, and an enviable collection of trophies is evidence of his prowess in that sport.

H. P. Mee, who as vice president not only has had immediate supervision of the sales department but also direction of advertising and service activities, relinquishes the direct supervision of the sales department for the broader duties of directing all sales, service and advertising activities, and to assist more fully in general company administration matters.

Patterson-Ballagh Wins Patent Suit Decision

Declaratory judgment in favor of Patterson-Ballagh Corporation has been rendered in the United States District Court, Southern District of California, in a patent suit involving the expander tool used in applying rubber protectors. William I. Bettis, plaintiff, sought declaratory judgment to invalidate the patent. Federal Judge Leon Yankwich in his decision stated: "This cause having been heard . . . and evidence oral and documentary having been introduced . . . the court having considered the evidence and the law . . . now find in favor of the defendant . . . and that a declaratory judgment in favor of the defendant be entered declaring and decreeing the letters patent No. 1,965,876 are good and valid in law and that the same were lawfully issued on July 10, 1934, and that the invention covered thereby was not abandoned by the inventor thereof and was not in public use more than two years prior to the time of the filing of the application for said patent . . ."

Pickering Re-elected Farrel-Birmingham Head

At the annual stockholders' meeting of Farrel-Birmingham Company, Incorporated, held at Ansonia, Connecticut, February 18, Nelson W. Pickering was re-elected president. The following officers were also re-elected: Franklin Farrel, Jr., chairman of the board of directors; Carl Hitchcock, vice president; Armin G. Kessler, vice president; Frederick M. Drew, Jr., treasurer; Laurie K. Blackman, assistant treasurer; George C. Bryant, secretary; William B. Marvin, assistant secretary.

All directors were re-elected with the addition of Franklin Farrel III, the fourth generation of the Farrel family in direct descent from the founder to be actively associated with the company.

A wage increase of 10 cents an hour for the 1050 employes of Oil Well Supply Company plant at Oil City, Pennsylvania, was announced last week. To become effective March 16, it is the second increase in four months. The company is a subsidiary of the United States Steel Corporation.

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Furthermore, it is not only perfect in the elimination of these troubles, and simplicity in itself to use, but because of its pure colloidal nature is absolutely harmless to equipment and persons applying it.

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Squeaks from the Bull Wheel

Whom?

"That is a pretty dress you have on."

"Yes. I only wear it to teas."

Individualist

"Who is really the boss in your house?"

"Well, of course, Wifie assumes command of the children, the servants, the dog, the cat, and the canary, but I can say pretty much as I please to the goldfish."

Serious

You ain't yo'self no more. Sick or sompin?

Got insomnia. Keep wakin' up every few days.

Shopping

"You broke into the same store three nights running?"

"Yes, sir; I stole only one dress for my wife and she made me change it twice."

Not Quite the Same

"My son went to the United States ten years ago to make his fortune."

"And what is he worth now?"

"I really don't know for certain, but the state of New York is offering $20,000 for information about him."

A Close Game

When men wore long beards—a wife allowed her husband to play poker twice a month while she had a party of lady friends. The husband came home one night while all were there, his whiskers loaded with tobacco juice.

Wife—Dear me, John, couldn't you turn your head to spit?

Husband—Nope, not in that game.

Found a Text to Fit

A preacher in the hills of Arkansas, considerably wrought up over the "top-knot" style of putting up their hair among girls and women, decided to preach a sermon on the subject. Then came the problem of finding a suitable text. After much searching, he found it in Matthew's Gospel 24:17, "Top not come down." His congregation sat amazed when he announced his text, but what the preacher failed to tell his hearers was that he did not quote the entire verse, which reads, "Let him which is on the house top not come down to take anything out of his house."

Considerate

There's a mistake of 50 cents in the butcher's bill today.

I'll go around and see about it at once.

The mistake is in our favor.

Oh, we'd better not pay any attention to it. We might get somebody in trouble.

Insistent Cabby

A Scotsman from the remote Highlands paid his first visit to London. On arriving at Euston, a voice immediately said, "Taxi, sir?"

Donald shook his head.

After exploring London, our Scots friend went on to Bristol. On emerging from the station he heard the familiar hail, "Taxi, sir?"

"No, thank ye," he bawled. "I said 'No' in London, and I meant it. Now stop following me about."

Corrected

James, have you whispered while I was out of the room?

Only wunst, ma'am.

Helen, should James say "wunst"?

No, ma'am, he should say "twicet."

To Examine Themselves

An unfortunate Irish sergeant had been drilling a singularly unresponsive troop of recruits, and had been unable to make them march in step and in good dressing. At last, however, just as he was about to give up in despair, he managed to get them to do it correctly. "Faith!" he roared, "an' you've done it, me lads! Fall out now and take a look at yerselves so you'll know how to do it next toime!"

Happiness

Mrs. Pecksniff—Henry, what in the world do you see in the marriage notices that's so funny?

Henry—I just saw the name of somebody that I don't like, and I'm going to send him a note of condolence.

Difficult Person

First Caddie—What's your man like, Skeet?

Second Caddie—Left handed, and keeps his change in his right-hand pocket.

Radio a Barometer

"Well, there's one thing to be said in radio's favor," began Morton.

"Really! What is it?"

"If you live in an apartment house you can tell what kind of neighbors you have by their sets."

"How come?"

"Easy. If they go for jazz, they are a peppy outfit; if they're fond of symphonies, they're dead from the neck up; if they listen to political speeches, they're nutty. But if they seldom turn the danged things on, they're swell folks."

Nature's Remedy

"I hear, Uncle Wash," said Doctor Brown, "that all your folks have the itch."

"Yas suh, Doctah," replied the old darky, "de good Lawd has don 'flicted we-all dat way."

"And are you doing anything for it, Uncle?"

"Oh, yas suh, Doctah, yas suh."

"What are you doing?"

"Why sur Doctah, we'all is scratchin' suh."

About the Same

The shop assistant was attempting to sell a bicycle to a farmer. "They're good and cheap," he urged, "and they don't eat their heads off when not in use. You'd find one mighty handy 'round your farm. I can sell you this one for forty dollars."

"Forty dollars! I'd rather put my money into a cow."

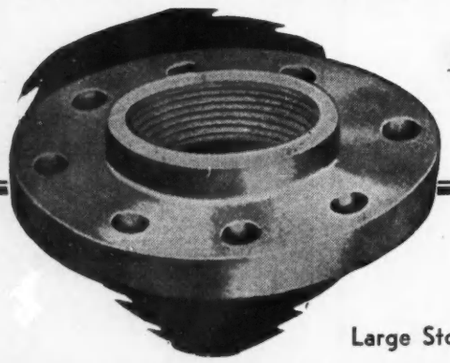
"But you'd look foolish riding a cow 'round your farm."

"Not so foolish as I'd look milking a bicycle."

"MECO"

FORGED STEEL FLANGES

For Every Purpose



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